

FM Stereo/FM-AM Receiver

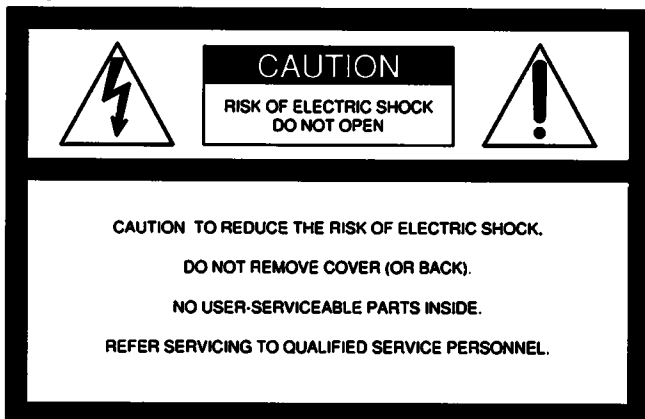
Operating Instructions

VisionTouch

STR-G1ES

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Owner's Record

The model and serial numbers are located on the rear of the unit. Record the serial number in the space provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. STR-G1ES

Serial No. _____

Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

INFORMATION

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Note on the remote commander:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION

You are cautioned that any change or modifications not expressly approved in this manual could void your authority to operate this equipment.

CAUTION

Use of this appliance with some systems may present a shock or fire hazard. Do not use with any units which have the following marking located near output. **WARNING: HAZARDOUS ENERGY !**

For the customers in Canada

CAUTION

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

This apparatus complies with the Class B limits for radio noise emissions set out in Radio Interference Regulations.

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Overview

The STR-G1ES is an FM Stereo/FM-AM receiver and audio/video control center that allows you to select and control multiple audio and video program sources using a hand-held remote commander and on-screen operations. Below are some of the features of the STR-G1ES.

On-screen control with a supplied remote commander (RM-VP1)

The supplied remote commander allows you to control multiple program sources with on-screen control buttons and a variety of on-screen control functions.

- The **AUTO PLAY** function starts playing the program source for you the moment you select it from the function panel.
- The **POWER ON AUTO START** function turns on a program source of your choice when you turn on the unit.
- The **CUSTOM IR CODE SET** function allows you to control home appliances, lights or other equipment that come with infrared remote commanders.
- The **MACRO PLAY SET** function lets you string together up to 10 commands, then execute them automatically and sequentially at the touch of a button.

Digital signal processor

- A **digital surround processor** electronically reproduces reflected sound (early reflection) and reverberating sound (reverberation), allowing you to reproduce the acoustical conditions of a variety of sound environments.
- The **DOLBY* PRO LOGIC Surround Decoder** is identical to that used in movie theaters, giving you the same theater-like sound experience.
- A **digital parametric equalizer** which controls the level of each frequency (TREBLE, MID, BASS) to obtain an equalization curve suited to your taste as well as the sound source.

Sound fields

- Ten factory-set sound fields (surround and parametric equalizer settings) are provided for a variety of sound environments, you can also customize each sound field using a variety of variable sound parameters.
- Once you select a sound field for a program source (except for the TAPE function), the sound field is activated whenever you select the source afterwards.

Amplifier

- The **Optical Legato Linear A System** allows the unit to perform as a Class A amplifier at low volumes and as a Class B amplifier at high volumes, without adverse effect on the sound quality. The result is minimal total harmonic distortion at each sound stage.
- The unit uses a **spontaneous twin-drive power circuit** with separate large-capacity condensers in the Class A voltage amplification drive stage and the Class B power output stage to obtain stable output and high-quality sound free of interference from the power stage, even during instantaneous or strong output.

Enjoying video and audio programs

Combine and play video and audio sources at the same time in a variety of combinations. (See page 34.)

Tuner

- A **quartz locked digital synthesizer** is used to enable highly precise tuning.
- A **station index system** makes tuning quick and easy.

LOW FILTER switch

This switch allows you to eliminate low-frequency signal output from the front speakers. (See page 8.)

* Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following patents: U.S. number 3,959,590; Canadian numbers 1,004,603 and 1,037,877. "Dolby", "Pro Logic", and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

How to Use the Receiver

- The STR-G1ES is an FM stereo/FM-AM receiver and audio/video control center.
- A TV set must be connected to the unit since all control operations are done through on-screen control buttons activated by the remote commander.
- In addition to Sony products, the unit can control any equipment with infrared (IR) remote control capability, including AV equipment of other manufacturers, lighting equipment and projection screens. To do this, you must first record the infrared (IR) remote commander codes from their respective remote commanders. (See "Recording Infrared (IR) Command Codes — AUDIO/VIDEO IR CODE SET" on page 14.)
- Manual control of program sources is also possible through the buttons on the unit itself.

Notes

- A TV screen is necessary even when playing purely audio program sources such as a CD player, tape deck or tuner.
- Since the unit can record only infrared commander codes that are output from a remote commander, only electrical equipment that are controllable by remote commanders can be controlled by the unit. Manually controlled equipment, such as power amplifiers, must be turned on and off manually.
- Distortion in the on-screen display may occur when the program source signal is weak or unstable due to damage in the program source or damage or wear of the program source medium.

Precautions

On safety

- Operate the unit only on 120 V AC, 60 Hz.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Unplug the unit from the wall outlet if it is not to be used for an extended period of time. To disconnect the cord, pull it out by grasping the plug. Never pull the cord itself.
- One blade of the plug is wider than the other for the purpose of safety and will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.

To prevent internal heat buildup in the unit

Place the unit in a location with adequate air circulation.

Do not install the unit:

- near heat sources such as radiators or air ducts.
- in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.

Do not place anything on top of the cabinet

The top ventilation holes must be unobstructed for the proper operation of the unit and to prolong the life of its components.

Do not throw away the carton and packing material

It will be an ideal container when transporting the system for repair work, etc.

On operation

Before making program source connections, be sure to turn the power switch off and unplug the unit.

On cleaning the cabinet

Clean the cabinet, panel and controls with a soft cloth lightly moistened with mild detergent solution. Do not use any type of abrasive pad, scouring powder, or solvent such as alcohol or benzine.

For the customers in the U.S.A.

For detailed safety precautions, see the "IMPORTANT SAFEGUARDS" leaflet.

If you have any question or problem concerning your unit, please consult your nearest Sony dealer.

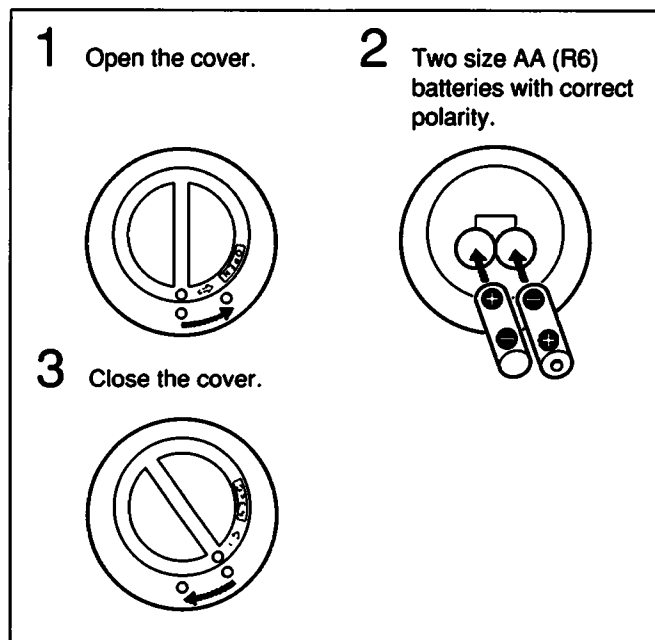
Unpacking

Checking the Supplied Accessories

After unpacking, check that the following accessories are present.

- FM wire antenna (1)
- AM loop antenna (1)
- Remote commander (RM-VP1) (1)
- Sony batteries SUM-3 (NS) (2)
- Remote Control (RC) antenna (1)
- IR repeater (1)
- Quick reference guide (1)

Inserting the Batteries Into the Remote Commander (RM-VP1)



Note

After inserting batteries into the remote commander, place it undisturbed on a flat surface for about 10 seconds to allow the internal circuitry to calibrate.

To avoid damage caused by battery leakage and corrosion

When the commander will not be used for a long time, remove the batteries.

Battery life

- Normal operation can be expected about a half year using Sony SUM-3 (NS), and a year using Sony AM-3 (NW) alkaline batteries. Since the remote commander consumes power whenever you pick it up and an on-screen display appears, the service life of the batteries may be less than half a year, depending on how much you handle the remote commander.
- When the batteries become weak, LOW will appear on the display during the initial on-screen displays (but possibly not at the deeper menu levels). When EMPTY appears, the batteries are almost completely drained and will soon need to be replaced.

Hooking Up the System

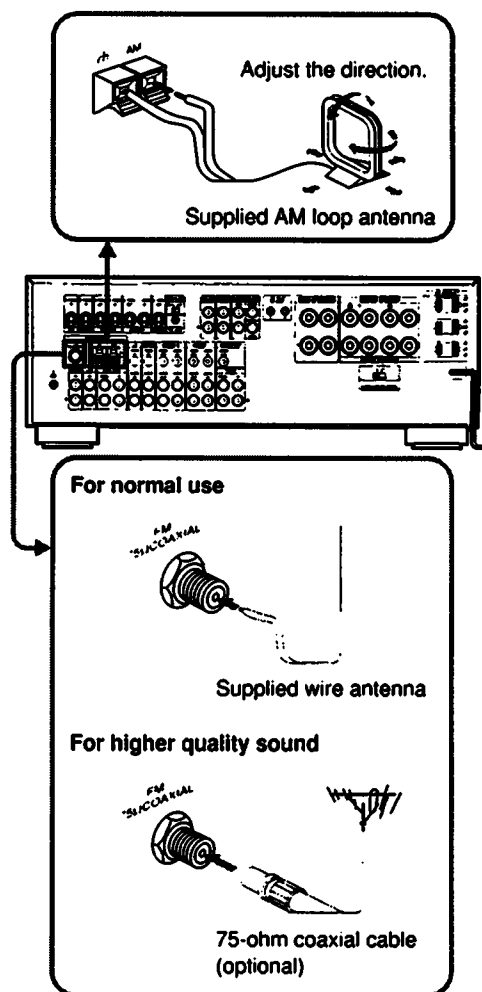
This section explains the connection of the antennas, program sources, speakers and AC power sources.

Notes

- Make sure all connections have been made before plugging the power cord into an AC outlet and pressing the POWER switch.
- Insert the plugs firmly into the jacks. Loose connections may cause hum and noise.
- Jacks and plugs of connecting cords are color coded as follows:
 Red jacks and plugs: Right audio channel
 White jacks and plugs: Left audio channel
 Yellow jacks and plugs: Video signals

Connecting the FM and AM Antennas

Though a wire FM antenna is supplied with your STR-G1ES, you can obtain better reception if you connect an outdoor FM antenna to the unit with a 75-ohm coaxial cable. The AM loop antenna supplied with your unit is adequate for most AM broadcasts.



Note

To prevent noise pick-up, keep the AM loop antenna away from the unit and TV set.

If your area has poor AM reception

If the AM reception in your area is poor, connect an 18- to 45-foot (6- to 15-meter) insulated wire to the AM antenna terminal and extend the wire outdoors, keeping it as horizontal as possible.

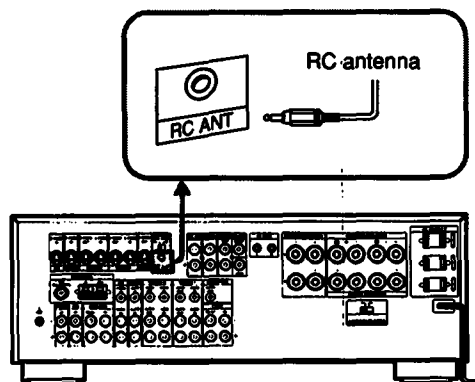
(There is no need to disconnect the supplied antenna.)

To prevent hum

Connect a ground wire to the ANTENNA ground terminal (π). If you use an outdoor antenna, be sure to connect the ground wire for lightning protection.

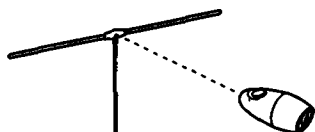
Connecting the RC Antenna

Since the remote commander controls the unit using RF (Radio Frequency) signals, you must connect the RC (Remote Control) antenna to the unit before you can use the remote commander.



To maximize RF signal transmission efficiency:

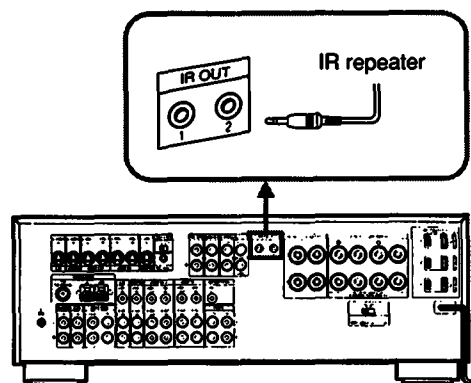
- Position the RC antenna perpendicular to the signal path of the remote commander (see below).



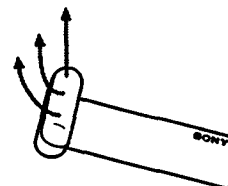
- Operate the remote commander within about 24 feet (about 7 m) of the RC antenna.
If you have difficulty operating the on-screen display within this range, reposition the RC antenna for better reception.
- Keep the RC antenna at least 20 inches (about 50 cm) away from metallic objects.

Connecting the IR Repeater

If you experience trouble controlling electrical equipment, it may be due to weak IR (infrared) signal transmission from the infrared emitter. In this case, turn off the unit, unplug the power cord, and connect the plug end of the IR repeater to IR OUT on the unit. Then, using the adhesive side of the emitter section, secure the IR repeater so that its front faces the equipment to be controlled. Note that the outputs of both IR OUT connectors are identical.

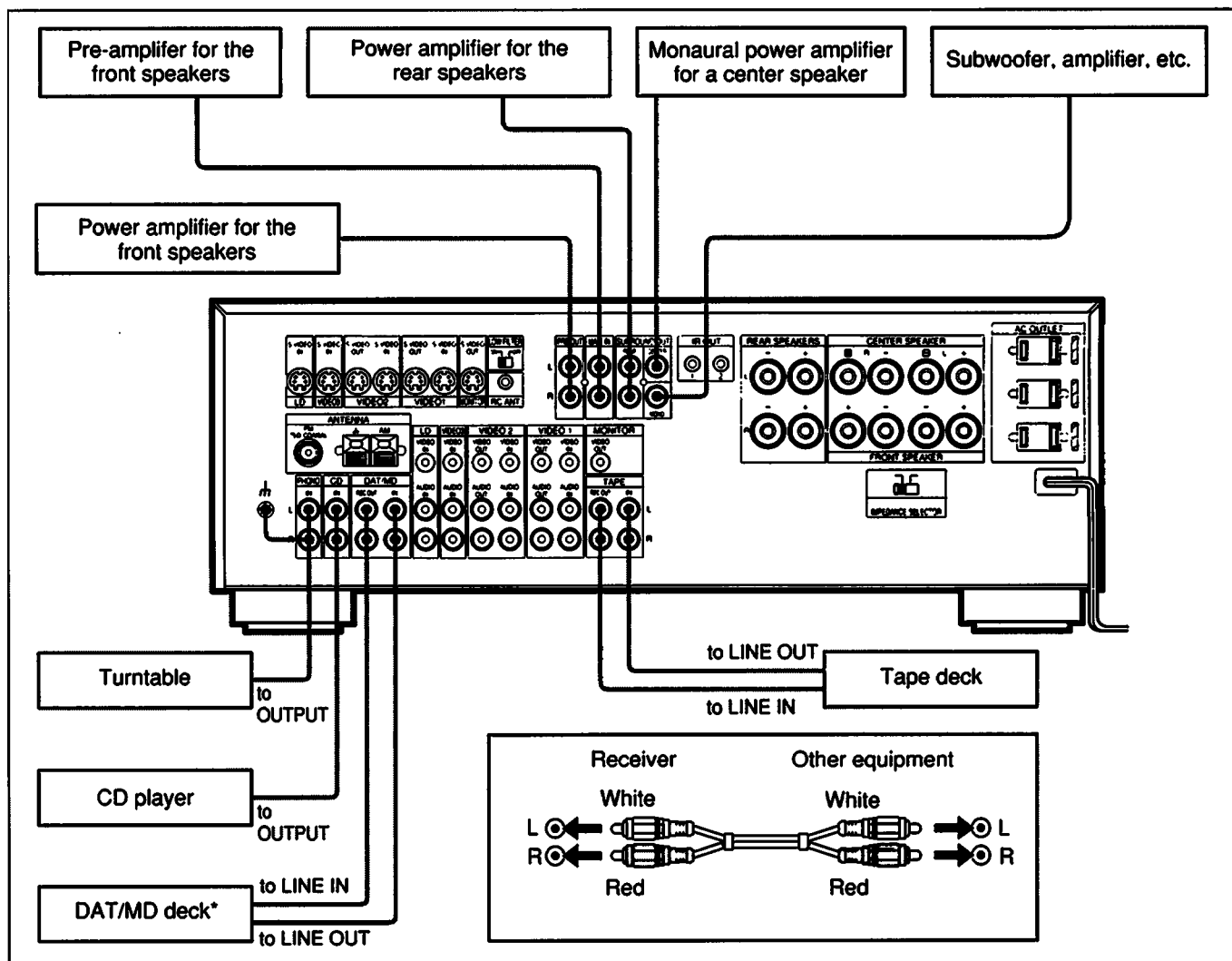


IR repeater



Hooking Up the System

Connecting Audio Equipment



* To connect both DAT deck and MD recorder, connect one of the units to the available VIDEO AUDIO IN/OUT jacks.

Connecting External Power Amplifiers and a Pre-amplifier

The unit has built-in amplifiers that are powerful enough for normal speaker output. However, additional power amplifiers and a pre-amplifier can be connected to obtain more powerful output. In this case, follow the precautions below concerning amplifier connections.

When connecting a monaural power amplifier for a center speaker

Connect the input jack of the power amplifier to the SURROUND OUT CENTER jack.

When connecting a subwoofer with a power amplifier

Connect the line input jack of the subwoofer to the SURROUND OUT MONO jack.

When using a subwoofer without a power amplifier, connect it through a monaural power amplifier.

When connecting a power amplifier for the rear speakers

Connect the input jacks of the power amplifier to the SURROUND OUT REAR jacks.

When connecting a pre-amplifier for the front speakers

Connect the input jacks of the pre-amplifier to the MAIN IN jacks.

When connecting a power amplifier for the front speakers

Connect the input jacks of the power amplifier to the PRE OUT jacks.

To obtain powerful sound from the rear speakers

Insert shorting plugs into the MAIN IN and SURROUND OUT REAR jacks and then connect a power amplifier to the PRE OUT jacks.

LOW FILTER switch

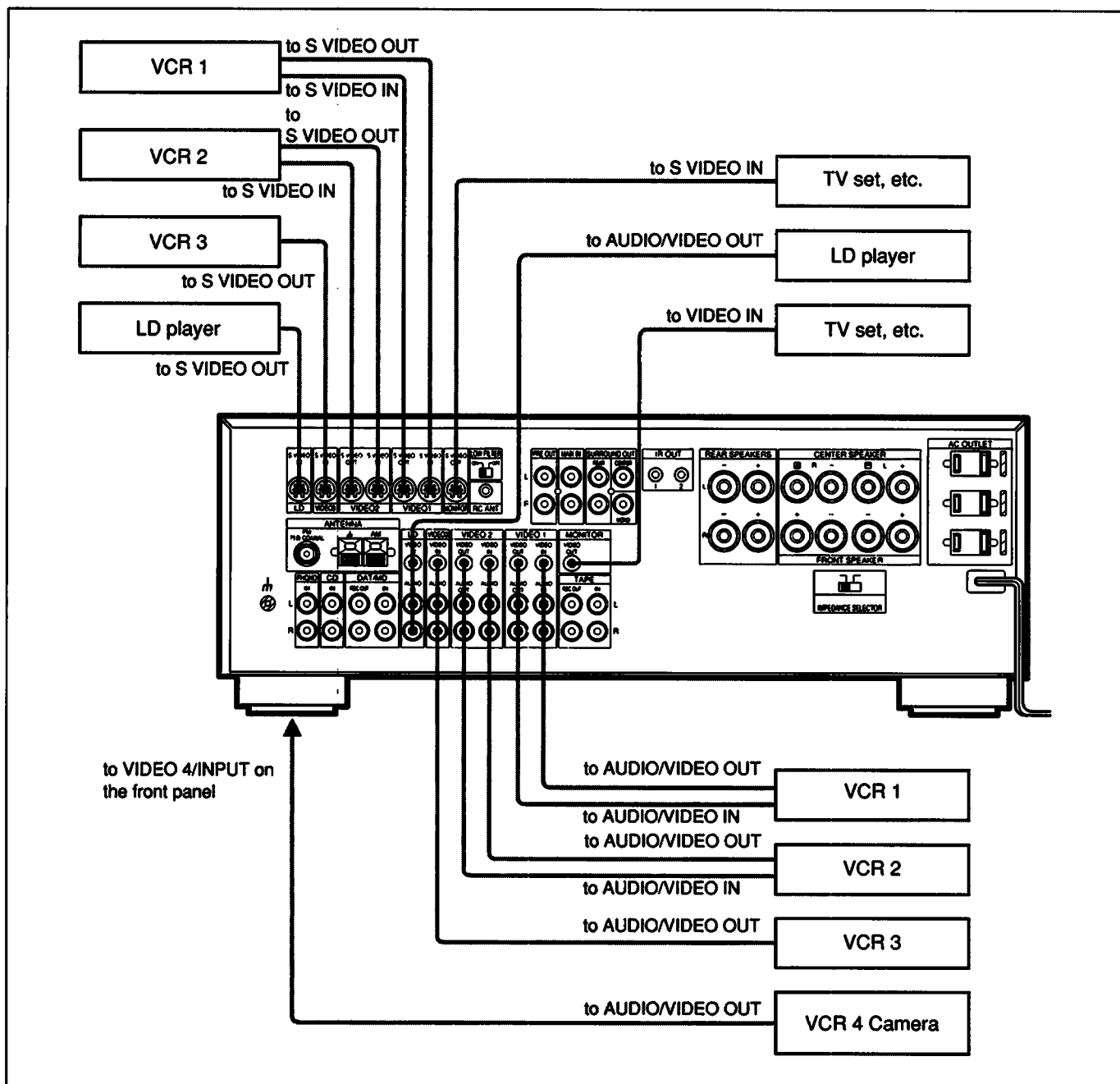
When LOW FILTER is on, low-frequency signals from the front speakers are eliminated. If you have connected a subwoofer, the result may be a higher quality sound.

Connecting Video Equipment

Connecting a VCR and TV set equipped with S jacks

Use connecting cords with S-conductor plugs to connect the VCR and TV to the S VIDEO jacks.

Use a normal connecting cord for the audio connections, as in the case of a VCR without S VIDEO connectors.



Notes

- The S VIDEO circuitry and the VIDEO circuitry of this unit are independent of each other. The signals input from the S VIDEO jacks are not output to the VIDEO jacks, and the signals input from the VIDEO jacks are not output to the S VIDEO jacks. Therefore, video dubbing is only possible between respective sets of S VIDEO jacks or VIDEO jacks.
- A higher quality picture results when you use the S jacks to

connect a VCR and TV set with S connectors. If your TV set has no S connector, connect it through the VIDEO OUT jack. In this case, do not:

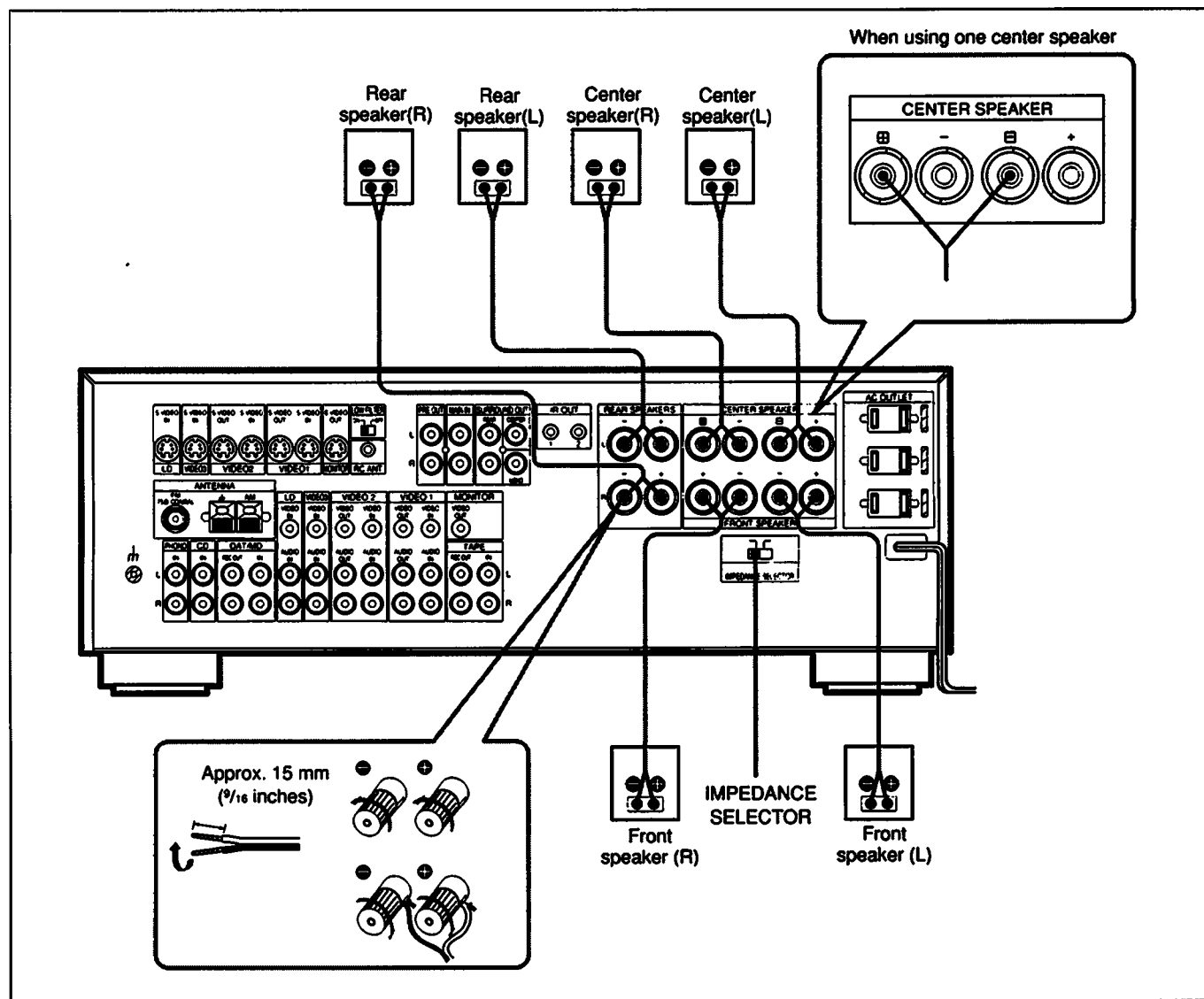
- Connect your VCR through S VIDEO IN jack.
- Connect your VCR through both the S VIDEO IN and VIDEO jacks at the same time.

In either of the above cases, you may experience display instability or color blurring.

Hooking Up the System

Connecting Speaker Systems

You can connect front, center and rear speakers to the unit.



On the IMPEDANCE SELECTOR

The unit has an IMPEDANCE SELECTOR for front speaker(s).

- When using front and center speakers with a nominal impedance of 4 ohms or higher, set to the 4 Ω position.
- When using front and center speakers with a nominal impedance of 8 ohms or higher, set to the 8 Ω position.

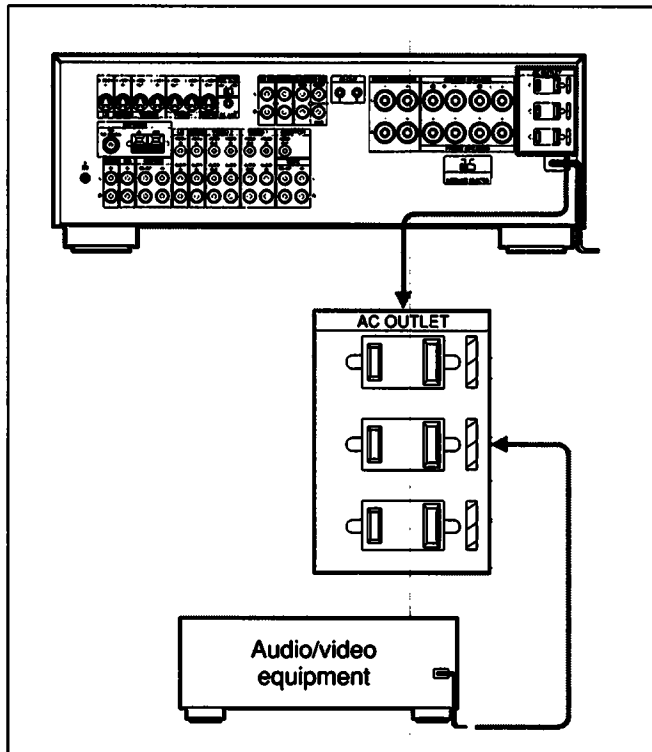
Note

When connecting a speaker cord to a speaker terminal, make sure that the polarity (+ or -) of the speaker cord is correct. If the polarity is reversed for any pair of speakers, the sound will be distorted and the bass will be weak.

Connecting to the Power Outlet

The three switched AC outlets on the rear panel allow you to use the unit as a power source for other audio or video equipment.

If you connect other audio or video equipment to the switched outlets, the equipment will turn on and off simultaneously with the unit. The switched outlets are thus convenient for connecting equipment that cannot be turned on or off by infrared control.



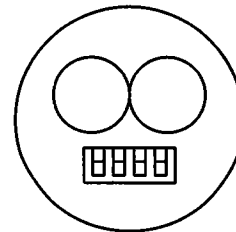
Caution

- Be careful that the total power consumption of each equipment connected to the outlets on the unit does not exceed 120 watts.
- Do not connect electrical home appliances such as an electric iron, fan, TV, or other high-wattage equipment to these outlets.

Preventing Interference Between Two or More Remote Commanders

If you use two or more STR-G1ES at the same time, interference may occur between the RF signals, causing the units to operate erratically. You can prevent this by the use of a unique security number which distinguishes the signals of a given unit from those of the other units. Follow the procedure below to assign a security number to each unit.

- 1 Turn off the power to the unit.
- 2 Press the ON button while holding down the PHONO and CD buttons on the front panel of the unit. SECURITY No. appears on the display. Specify a number between 0 and 15 by pressing PRESET TUNING – or + on the front panel. Make sure that the number is different from the security codes of the other units.
- 3 After a few seconds, SECURITY VALID appears, indicating that the code has been recorded.
- 4 Enter the same security number into the remote commander. To do this, open the battery compartment and remove the batteries. You will see a set of yellow switches as shown below.



Use the tip of a pen or some other pointed object to flip up the appropriate switches for each digit of the security number. Note that all switches are down for zero, and all switches are up for fifteen.

SECURITY NO.	Remote commander	SECURITY NO.	Remote commander
0		8	
1		9	
2		10	
3		11	
4		12	
5		13	
6		14	
7		15	

How to Use the Remote Commander (RM-VP1)

Use the remote commander to turn on the STR-G1ES and to control the pointer on the TV screen.

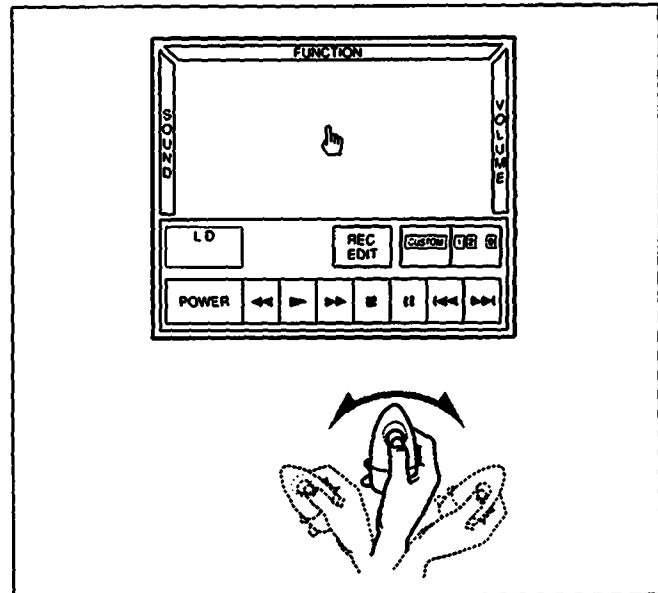
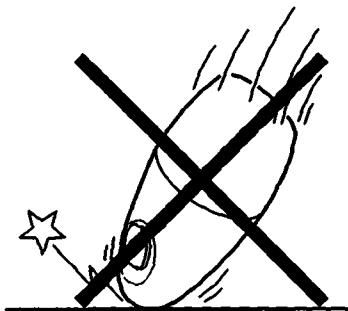
- When using the remote commander, keep the button parallel to the floor.
- Press the button on the remote commander to turn on the unit.
- A slight move of the wrist is all you need to direct the pointer.
- By moving the remote commander, you can position the pointer onto a menu or control button on the TV screen.
- Activate control buttons selected by the pointer by pressing the button on the remote commander.
- If you place the commander on a flat surface, the on-screen display will disappear after a few seconds.
- The on-screen display will appear each time you touch or press the button on the remote commander.
- The pointer position freezes when you hold down the button.

Notes

- If the pointer begins drifting on the screen even when the remote commander is stationary, place the remote commander on a flat surface until the on-screen display disappears. The pointer should behave normally when you use the remote commander again.
- The on-screen display may not appear when you touch the remote commander button if your hand is too dry.

Caution!

Since the remote commander is comprised of delicate circuitry and parts, do not subject it to sudden changes in temperatures or shocks.

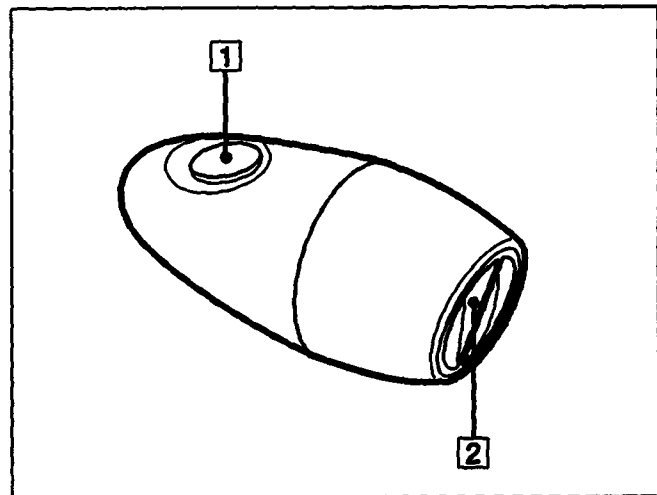


FUNCTION: Selects the program source, selects the SET UP menu, and turns off power to the unit and other electrical equipment.

VOLUME: Controls the volume of the program source

Control panel: Activates the respective program source

SOUND: Selects the sound field



1 Click button

Press this button to activate a button or select a menu item on the screen.

2 Battery compartment

Insert batteries here (see page 6).

Note

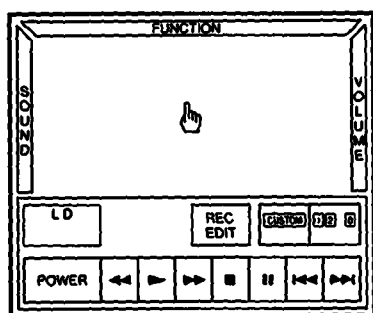
If the on-screen display does not appear even when batteries are inserted into the remote commander, reinsert the batteries and place the remote commander on a flat surface for about 10 seconds.

Performing the Basic Set Up

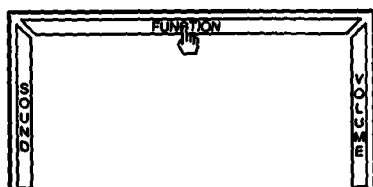
Initial TV Set Up — TV SET UP

After doing the TV SET UP procedure, the TV set will turn on whenever you turn on the STR-G1ES with the remote commander. This procedure is unnecessary if the TV set is a Sony product with an infrared remote commander and connected to the unit through the VIDEO1 input jack of the TV set.

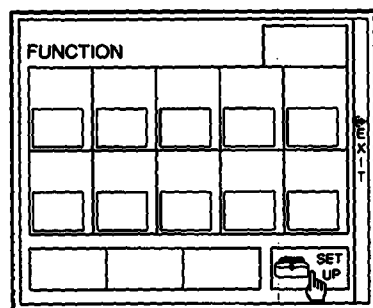
- 1 Turn on the STR-G1ES and TV set.**
Make sure to change the input selector on the TV set to video input.
The main menu appears.



- 2 Click on FUNCTION in the main menu.**
The FUNCTION menu appears.

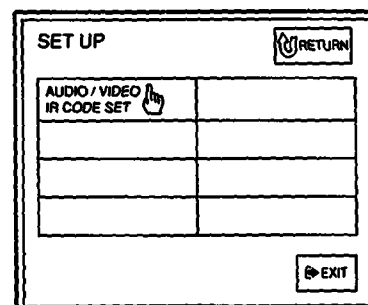


- 3 Click on SET UP.**
The SET UP menu appears.

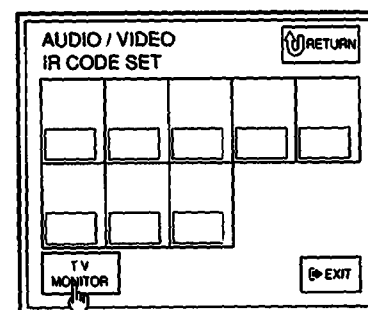


To return to the main menu, click on EXIT.

- 4 Click on AUDIO/VIDEO IR CODE SET.**
The IR CODE SET menu appears.



- 5 Click on TV MONITOR.**
The TV SET UP menu appears.



Note

Before proceeding to step 6, cover the remote control sensor of the TV set to prevent accidental operation of the TV set while you record the IR codes.

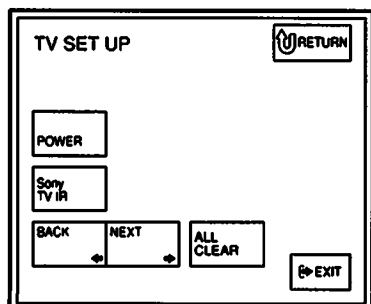
(Continued on next page.)

Performing the Basic Set Up

(Continued from previous page.)

6 Follow the instructions on the TV screen to record the IR code of the respective remote commander button.

Point the remote commander at the words "VisionTouch" on the left side of the front panel at a distance of about 12 inches (30 cm) and hold down the button indicated by the screen instructions.



At most, 5 seconds are required for recording the IR code. If nothing happens after 5 seconds, click once on NEXT, then on BACK, then try to record the IR code again with the remote commander closer to the unit. OK appears on the screen when the IR code has been successfully recorded.

If your TV set's remote commander has an independent input selector button, press this button to input the IR code of the selected TV set input (e.g., VIDEO1) when TV/VIDEO appears.

If your TV set has no independent input selector button or only a cyclic input selector button, click on NEXT to skip to the next IR code or EXIT to leave the menu. The specified input (i.e., VIDEO1) is automatically selected when you turn on the unit and the TV set.

Note

Click on ALL CLEAR to erase all recorded IR codes.

To exit from the menu

Click on EXIT.

To go to the previous menu

Click on RETURN.

To change from another manufacturer's TV set to a Sony TV set

Connect the unit to the VIDEO1 input jacks of the Sony TV set.

Follow steps 1 through 5, then click on SONY TV IR in step 6.

Note

Some Sony TV sets may select an input source other than VIDEO1 when you turn them on with the STR-G1ES. To ensure the selection of VIDEO1, do steps 1 to 5 of the TV SET UP procedure, click on NEXT in step 6 until TV/VIDEO appears, then record the IR code for the VOL - button of the TV set's remote commander.

Recording Infrared (IR) Command Codes — AUDIO VIDEO IR CODE SET

If you have Sony audio or video equipment with an infrared remote commander, simply connect it to the appropriate STR-G1ES connector. IR code set up is unnecessary (see table below).

You must do the IR code setup procedure for Sony products

- when you connect a Sony product to connectors other than those specified for it in the table below. (for example, when connecting a Sony LD player to the VIDEO3 connectors).
- when exchanging a non-Sony audio or video program source with a Sony product.

STR-G1ES connectors		Equipment to be connected
VIDEO1	→	Sony VCR* (Beta or ED Beta VCR to VTR1.)
VIDEO2	→	Sony VCR* (8mm VCR to VTR2.)
VIDEO3	→	Sony VCR* (VHS VCR to VTR3.)
LD	→	Sony LD player
DAT/MD**	→	Sony DAT deck
CD	→	Sony CD player
TAPE	→	Sony Tape deck
MONITOR	→	Sony TV (VIDEO1 jack)

* If your VCR has a COMMAND CODE selector switch (i.e., for VTR1, VTR2, or VTR3), set the switch to the applicable setting.

** You must do the IR code setup procedure for Sony products when connecting a Sony MD recorder to these connectors.

If you've connected audio or video equipment made by another manufacture, you must first record the IR codes used by that equipment before you can control it using the STR-G1ES.

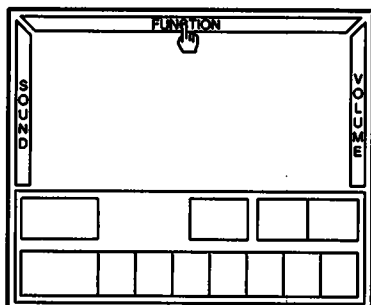
You can record up to 80 IR codes (AUDIO/VIDEO and CUSTOM). However, you may experience recording difficulties or reach the IR code capacity even before 80 IR codes in the following cases:

- when recording the IR codes of special remote commanders, card type models or those for air conditioners.
- when recording from remote commanders with weak batteries.

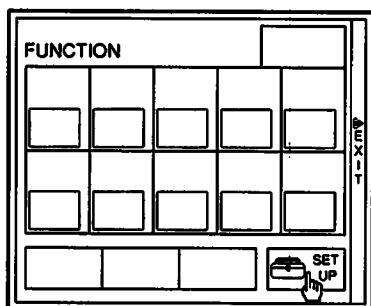
For this reason, you should record the IR codes of the important commands first and skip the rest.

-
- 1** Turn on the STR-G1ES and TV set.
The main menu appears.
-

- 2** Click on **FUNCTION** in the main menu.
The **FUNCTION** menu appears.

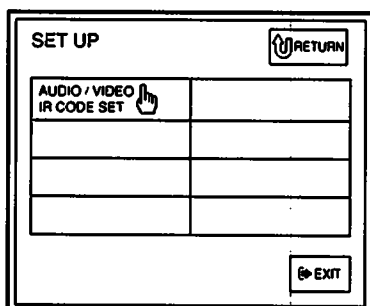


-
- 3** Click on **SET UP**.
The **SET UP** menu appears.

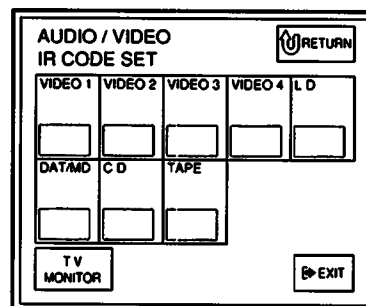


To return to the main menu, click on **EXIT**.

-
- 4** Click on **AUDIO/VIDEO IR CODE SET**.
The **AUDIO/VIDEO IR CODE SET** menu appears.

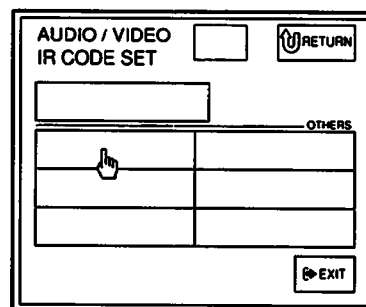


-
- 5** Click on the **program source (function)**.
The program source menu appears allowing you to specify the IR code set of a Sony product or the product of another manufacturer.



Recommended Sony products and previously recorded program sources appear in the respective boxes.

-
- 6** If the program source is a Sony product but the connector used is not the one listed in the table on page 14 for the respective product, go to step 8 to change the IR code setting for the respective program source menu button.
If the program source is not a Sony product, click on the respective program source under "OTHERS."
The IR code setting menu appears.



Note

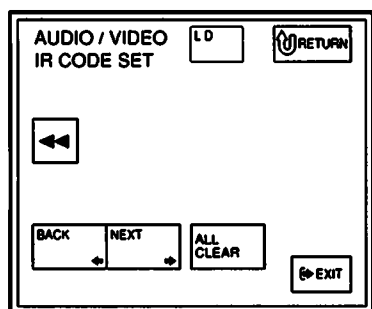
When recording the infrared command codes of equipment of other manufacturers, keep the original equipment off, or cover their remote control sensor.

(Continued on next page.)

Performing the Basic Set Up

(Continued from previous page.)

- 7 Follow the instructions on the TV screen to record the necessary IR codes of the respective remote commander.**
Point the remote commander at the words "VisionTouch" on the left side of the front panel at a distance of about 12 inches (30 cm) and hold down the button indicated by the screen instructions.
To skip unnecessary IR codes, click on NEXT. After you have finished recording all necessary IR codes, click on EXIT to leave the menu.

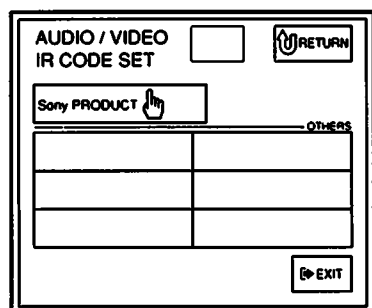


At most, 5 seconds are required for recording the IR code. If nothing happens after 5 seconds, click once on NEXT, then on BACK, then try to record the IR code again with the remote commander closer to the unit. OK appears on the screen when the IR code has been successfully recorded.
To register special commands that do not appear on the screen, see "Storing Other Manufacturers' Infrared Command Codes — CUSTOM IR CODE SET" on page 36.
After all codes have been recorded, the AUDIO/VISUAL IR CODE SET menu of step 5 reappears.

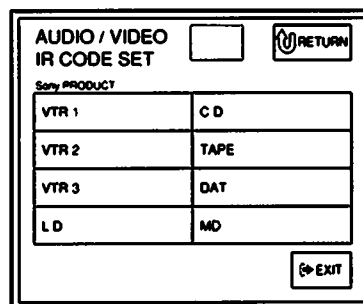
This ends the IR code setting procedure for non-Sony program sources.

Note
Click on ALL CLEAR to erase all recorded IR codes.

- 8 Click on Sony PRODUCT.**
The Sony program source menu appears.



- 9 Click on the program source.**
The Sony PRODUCT IR codes are automatically entered.



The selected program source appears in a message and the IR code setting menu of step 5 reappears.

Note
If this procedure does not work for a given Sony product (i.e., the MDS-101 MiniDisc recorder or older Sony products), follow steps 6 and 7 to record the IR codes of that product as a non-Sony program source.
Before doing this procedure, make sure the selected equipment is turned off or its remote control sensor is covered.

- 10 Repeat steps 5 through 9 to set the IR codes of additional program sources.**

To exit from the menu
Click on EXIT.

To go to the previous menu
Click on RETURN.

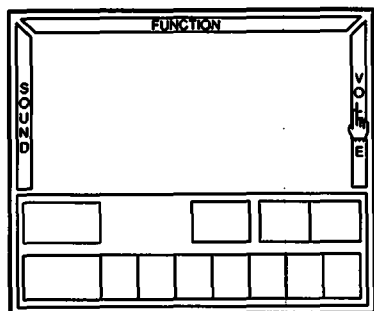
- Notes**
- The STR-G1ES emits an IR signal that cancels the automatic playback function of program sources, such as LD and CD players, designed to start playing the moment they are turned on.
 - The unit may not be able to record IR codes with special waveforms produced on some remote commanders.
 - If you discover later that a code was not successfully recorded (even if "OK" appeared at the time), try recording the code again at a distance between about 8 and 24 inches (20 to 60 cm) from the unit.

Selecting From the Main Menu

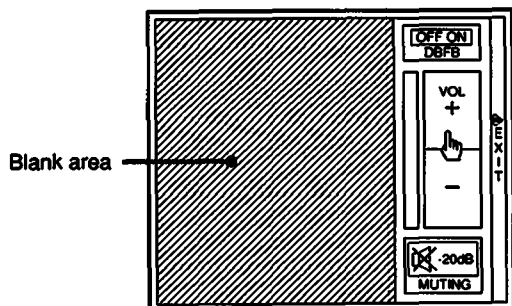
Use the main menu to adjust the volume, select and control program sources, and select the sound field.

Adjusting the Volume

- 1 Click on **VOLUME** in the main menu.
The sound control panel appears.



- 2 To increase or reduce the volume.
Click on the VOL + or - button.



If you want to see the whole screen while playing a visual program source, click on a blank area in the main menu and hold down the button on the remote commander. The on-screen display disappears until you release the button.

To return to the main menu, click on EXIT.

For more powerful bass

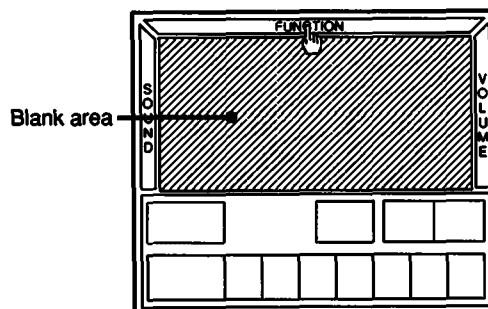
Click on DBFB (Dynamic Bass Feedback) to turn it on.
Click again to turn off.

To mute the speakers

Click on MUTING to turn on the -20 dB indicator.
Click again to turn off.

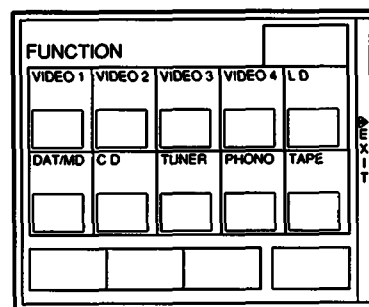
Playing a Program Source

- 1 Click on **FUNCTION** in the main menu.
The FUNCTION menu appears.



If you want to see the whole screen while playing a visual program source, click on a blank area in the main menu and hold down the button on the remote commander. The on-screen display disappears until you release the button.

- 2 Click on the program source.
The control panel of the selected program source appears with the main menu, and the program source starts playing. In the case of video sources, a bar lights up above the respective icon when selected.



To return to the main menu, click on EXIT.

To turn off the TV set, click on TV OFF.

To turn on the TV set, press the button on the remote commander.

Notes

- MONITOR appears above the tape icon during tape monitoring.
- The AUTO PLAY function plays the program source immediately after it is selected. To turn the AUTO PLAY function off, see page 34.
- If you leave the remote commander on a flat surface for a few seconds, the on-screen display will disappear. To see the on-screen display again, touch or press the remote commander button.
- No control panel appears when you click on PHONO.

Selecting From the Main Menu

To show additional control buttons

Click on the "1 2 ... 0" button.

To show CUSTOM IR control buttons

Click on CUSTOM. (See page 36.)

To watch TV programs

Select the FUNCTION menu, click on the video deck for which you have recorded IR codes, then click on the TV selector button in the VCR control panel. TV control buttons appear. To return to the VCR, click on video cassette icon in the TV control panel.

If you leave directly from the TV control panel to the FUNCTION menu, the AUTO PLAY function will not activate the VCR when you select it as a program source at a later time.

To play a program source manually

You can select program sources manually by pressing the buttons on the front panel of the STR-G1ES. Manually selected sources, however, cannot be played with the AUTO PLAY or POWER ON AUTO START (see page 35) functions, and must be operated from their respective control panels.

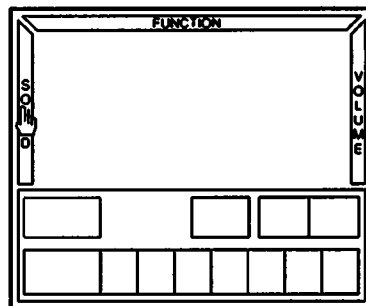
Notes

- Program sources of the same type will be simultaneously controlled by remote commander.
For example, if you use the remote commander to start playing one of two Sony laser disc players in the room, the other will start playing at the same time.
- It is recommended that you use the remote commander to turn on all electrical equipment at the same time as the unit and that you do not turn off any electrical equipment independently of the unit. This will prevent the occurrence of conflicting operations later, such as turning off the TV as you turn on other equipment.
- If a program source does not respond, it may be because infrared command codes from the unit are not fully reaching the given program source. If this occurs, change the position of the unit or the given program source, or connect the plug end of the IR repeater to IR OUT on the unit. (See page 7.)

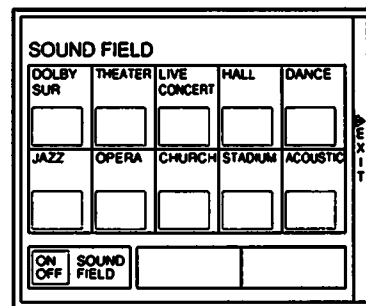
Selecting a Preset Sound Field

The unit comes with 10 preset sound fields that reproduce the acoustics of various sound environments. For more information on sound fields, see "Chapter 3 Audio Adjustment" on page 26.

- 1 While playing a program source, click on SOUND in the main menu.**
The SOUND FIELD menu appears.



- 2 Click on a sound field.**
The selected sound field turns on.
Make sure that the SOUND FIELD is on. If not, click on the button to turn it on.



Once you select a sound field for a program source (except for the TAPE function), the sound field is activated whenever you select the source afterwards. To return to the main menu, click on EXIT.

SOUND FIELD	Applications
DOLBY SUR	For Dolby surround encoded video programs
THEATER	For movie programs on video tapes or laser discs
LIVE	For music programs on video tapes or laser discs
HALL	For orchestral music, chamber music or an instrumental solo
DANCE	For dance music
JAZZ	For jazz
OPERA	For operas or musicals
CHURCH	For church music or pipe organ
STADIUM	For live concerts in an open-air stadium
ACOUSTIC	The surround effect is off and the equalizer effect is on.

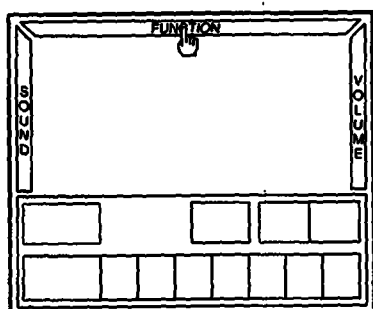
To customize the parameters of the selected sound field
See "Adjusting the Digital Surround Parameters" on page 30 to specify the room size and other parameters in order to bring the sound conditions closer to that of a live performance.

Adding Names (INDEX)

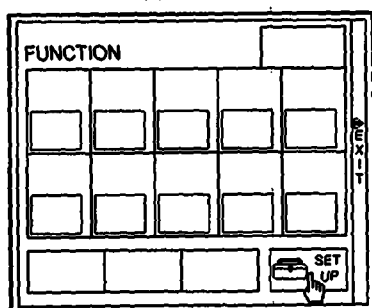
Using the INDEX menu, you can specify names of up to 12 characters for each program source except the tuner. You can also use the INDEX menu to add the station names to the preset radio station buttons. (To preset a radio station, see page 22, "Presetting Stations.")

Adding Names to Program Sources

- 1 Click on **FUNCTION** in the main menu.
The FUNCTION menu appears.

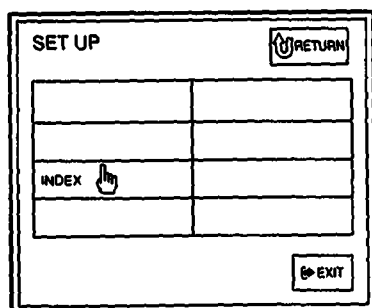


- 2 Click on **SET UP**.
The SET UP menu appears.

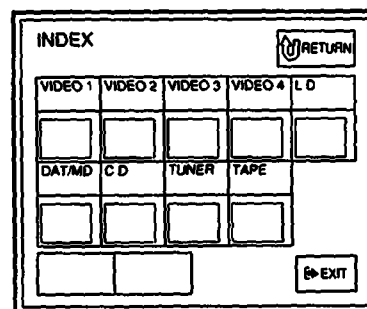


To return to the main menu, click on EXIT.

- 3 Click on **INDEX**.
The INDEX menu appears.



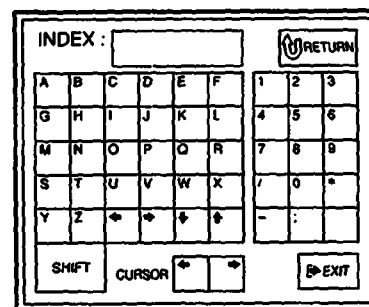
- 4 Click on the program source name or the icon to be changed.
Character input buttons or icons appear.
You can select all program sources except PHONO.



- 5 If you clicked on the program source name, spell out the new name by clicking on each character.
After clicking, the character appears in the box after INDEX:.

To correct an entered character, click on ← or → to highlight the character, then click on the correct character. To erase an entered character, click on ← or → to highlight the character, then click on the blank button.

To change the character set, click on SHIFT. Each click selects uppercase letters or lowercase letters.



If you clicked on an icon in step 4, select a new icon from the icon menu.

To exit from the menu
Click on EXIT.

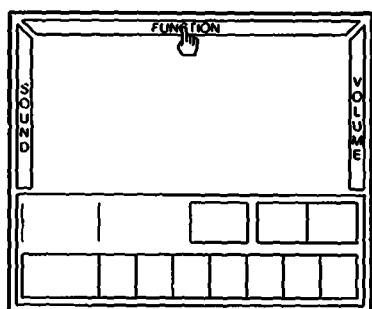
To go to the previous menu
Click on RETURN.

Adding Names (INDEX)

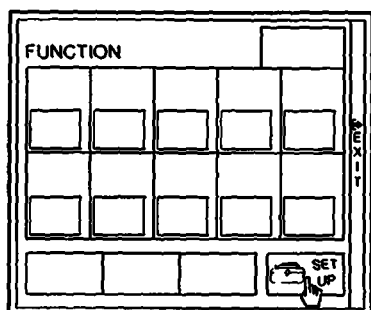
Adding Radio Station Names to Preset Radio Station Buttons

Use the INDEX menu to specify station names of up to 6 characters for the preset radio station buttons.

- 1 Click on **FUNCTION** in the main menu.
The FUNCTION menu appears.

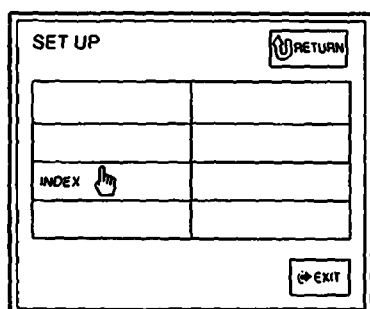


- 2 Click on **SET UP**.
The SET UP menu appears.

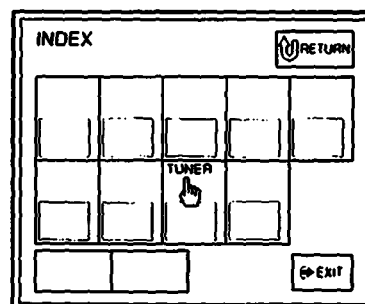


To return to the main menu, click on EXIT.

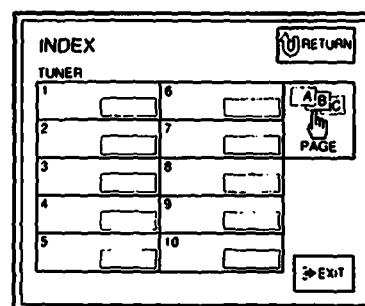
- 3 Click on **INDEX**.
The INDEX menu appears.



- 4 Click on **TUNER**.
The INDEX menu for radio station storage appears.

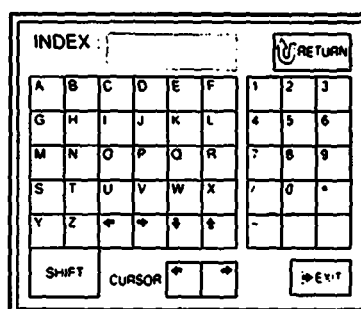


- 5 Click on **PAGE** to select the index page (A, B or C) containing the preset radio station to be named.
Each click selects A, B, or C.



- 6 Click on the station to be named.
Character input buttons appear.

- 7 Spell out the name by clicking on each character.
After clicking, the character appears in the box after INDEX.
To correct an entered character, click on ← or → to highlight the character, then click on the correct character. To erase an entered character, click on ← or → to highlight the character, then click on the blank button.
To change the character set, click on SHIFT. Each click selects uppercase letters or lowercase letters.



To exit from the menu
Click on EXIT.

To go to the previous menu
Click on RETURN.

Tuning in Radio Broadcasts

Selecting the AM Tuning Interval

The AM tuning interval is preset to 10 kHz. When using the receiver where the frequency allocation system is based on a 9 kHz interval, make the following adjustments.

- 1 Turn on the power and tune in any AM station.
- 2 Turn off the power.
- 3 Press the POWER button while holding down the PRESET TUNING + button on the front panel of the unit.
To change the AM tuning interval back to 10 kHz, repeat the above steps.

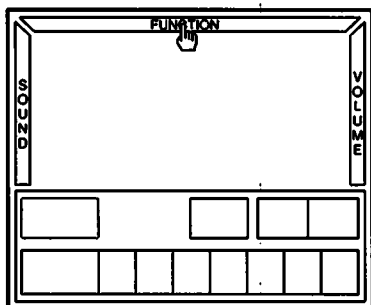
Note

When the interval is changed, all preset stations are erased. After changing the interval, be sure to preset the stations again (see "Presetting Stations" on page 22).

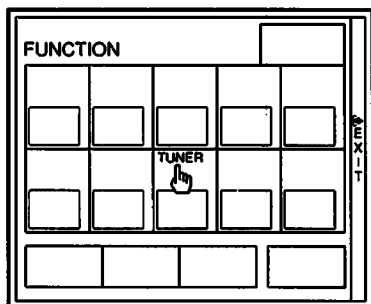
Automatic Tuning

Follow the procedure below to tune in radio stations.

- 1 Click on **FUNCTION** in the main menu.
The FUNCTION menu appears.



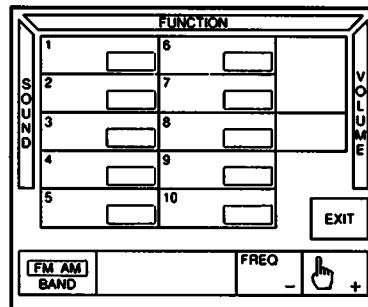
- 2 Click on **TUNER**.
The preset station menu and the tuner control panel appear.



To return to the main menu, click on EXIT.

- 3 Click on **FREQ - or +**.

The tuner begins scanning for radio stations in the respective direction, then stops when it finds a strong station. Click on either button to continue scanning.



Click on BAND to switch between FM and AM.

To show the tuner control panel without the preset station menu

Click on EXIT. The REC EDIT, CUSTOM and LIST buttons appear at this time. To return to the preset station menu with the tuner control panel, click on LIST.

Note

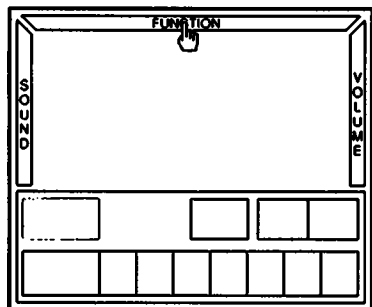
When listening to an AM station, keep the AM loop antenna away from the TV set to prevent noise pickup.

Tuning in Radio Broadcasts

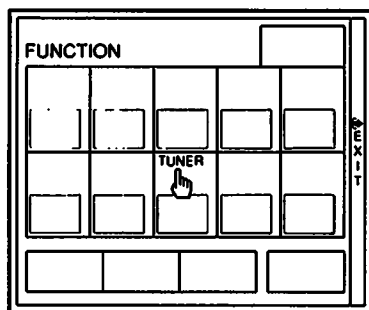
Presetting Stations

You can preset up to 30 FM or AM radio stations, then recall them later with the click of a button.

- 1 Click on **FUNCTION** in the main menu.
The **FUNCTION** menu appears.

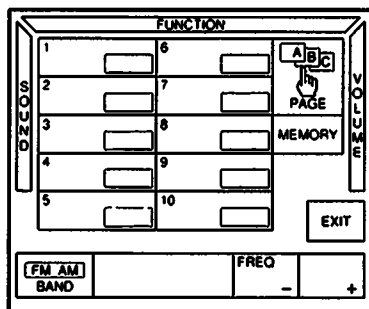


- 2 Click on **TUNER**.
The preset station menu and the tuner control panel appear.



To return to the main menu, click on **EXIT**.

- 3 Click on **PAGE** to select a memory page (A, B, or C).
Each click selects A, B, or C.



- 4 Click on **FREQ -** or **+** to tune in the station to be stored.

The tuner begins scanning for radio stations in the respective direction, then stops when it finds a strong station. Click on either button to continue scanning. Click on **BAND** to switch between FM and AM.

- 5 Click on **MEMORY**.

- 6 Click on the button (1 to 10) to be used to store the radio station.
The button lights up, and the selected station is stored to the selected button.

- 7 Repeat steps 3 through 6 to preset more stations.

To replace a preset station with a new one

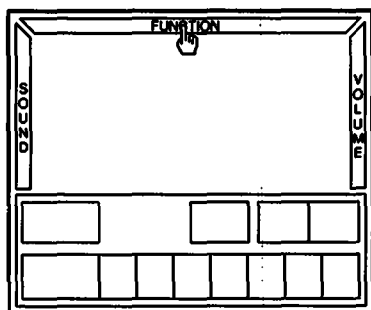
Do the procedure in exactly the same way. The new station will replace the preset station already stored to the selected button.

To show the tuner control panel without the preset station menu

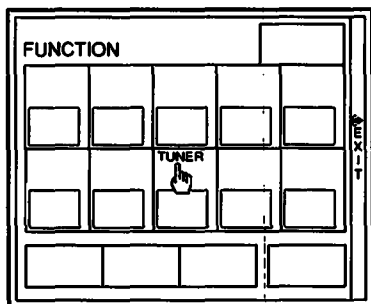
Click on **EXIT**. The **REC EDIT**, **CUSTOM** and **LIST** buttons appear at this time. To return to the preset station menu with the tuner control panel, click on **LIST**.

Tuning in a Preset Station

- 1 Click on **FUNCTION** in the main menu.
The **FUNCTION** menu appears.

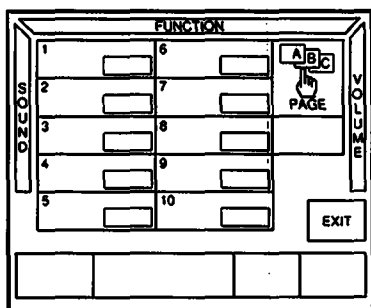


- 2 Click on **TUNER**.
The preset station menu and the tuner control panel appear.



To return to the main menu, click on **EXIT**.

- 3 Click on **PAGE** to select the page (A, B or C).
Each click selects page A, B or C.



- 4 Click on the station to be tuned in.
The preset station is tuned in.

To listen to a preset station with a preset sound field
After selecting the preset station, click on **SOUND** in the main menu and select a sound field. The sound field is memorized and activates each time you select the preset station thereafter.

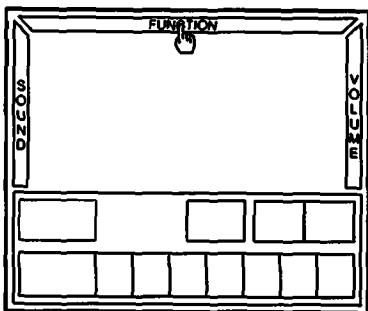
Note

The memorized station is maintained for approximately two weeks even if the power cord is disconnected from the AC power outlet. If they are erased, preset the stations again.

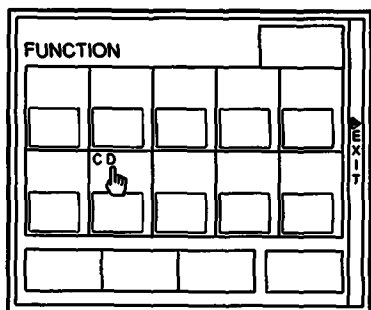
Recording Audio Sources

Use this procedure to record to a cassette tape deck, DAT deck or MiniDisc recorder.

- 1 Click on **FUNCTION** in the main menu.
The **FUNCTION** menu appears.

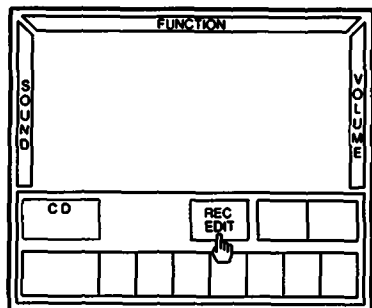


- 2 Click on the audio source.
In this example, the audio source is a compact disc player.
The control panel of the audio source appears.

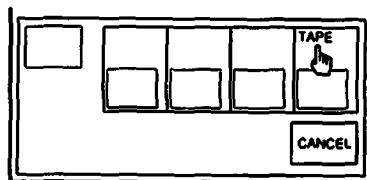


To return to the main menu, click on **EXIT**.

- 3 Click on **REC EDIT**.
The menu for the **REC EDIT** button appears.

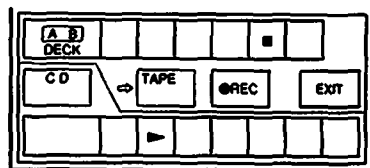


- 4 Click on the recording unit.
In this example, the recording unit is a cassette tape deck.
The control panel of the cassette tape deck appears.



To cancel the process, click on **CANCEL**.

- 5 To start recording.



- 1 Insert the medium (cassette) into the recording unit (cassette tape deck).
- 2 Click on **REC**, or **REC**, then **▶** (as required on your cassette deck) of the recording unit to start recording.
The recording unit starts recording.
- 3 Click on **▶** of the audio source.
Recording of the audio source begins.

Notes

- There is no sound output from the recording unit even though all buttons on the recording unit's control panel are operational.
- If you click on another program source during recording, the tape recording stops and the selected source will start playing.
- Some cassette decks require the simultaneous pressing of the **REC** and **▶** buttons to record. To enable one-button recording with only the **REC** button, do steps 1 to 7 of the **AUDIO/VIDEO IR CODE SET** procedure for a non-Sony product (pages 15 to 16), even if your deck is a Sony product, and press the **▶** button while holding down the **REC** button when **REC** appears on the TV screen in step 7.

To stop recording, click on **■** of the recording unit.

To leave the audio recording menu, click on **EXIT**.

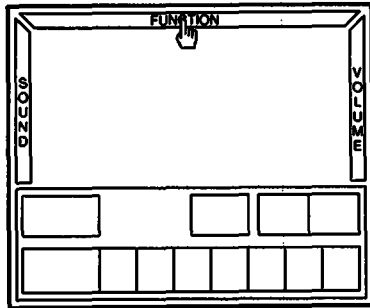
To record radio broadcasts, click on **EXIT** in the preset station menu. **REC EDIT** will appear. Then do steps 3 through 5 in the procedure above.

Note

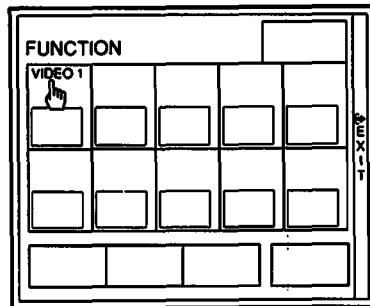
Sound input through the **TAPE** connectors on the rear panel cannot be recorded by a recording unit.

Video Tape Dubbing

- 1 Click on **FUNCTION** in the main menu.
The **FUNCTION** menu appears.

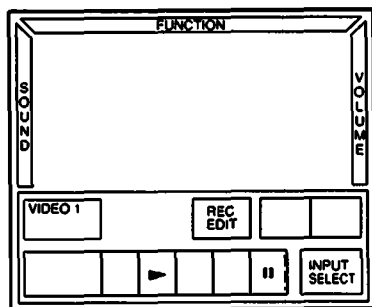


- 2 Click on the video source.
In this example, video deck 1 is the video source.
The control panel of video deck 1 appears.



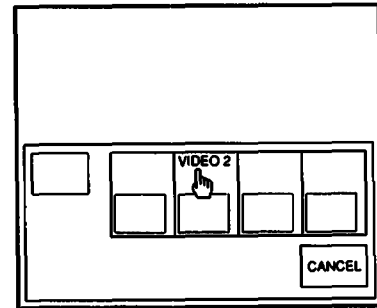
To return to the main menu, click on **EXIT**.

- 3 If necessary, play the selected video source and pause where video dubbing is to start.
Click on ► of the video source to play, then click on || to pause.



- 4 Click on **REC EDIT**.
The menu for the **REC EDIT** button appears.

- 5 Click on the video recording unit.
In this example, video deck 2 is the recording unit.
The control panel of both units appear.

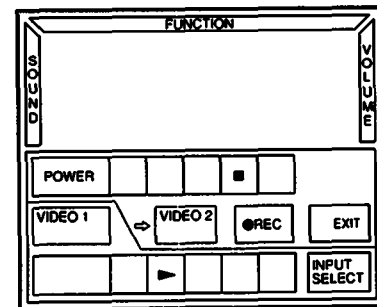


To cancel the process, click on **CANCEL**.

Note

Verify that the recording unit is set to the **VIDEO IN** connectors (external video input). If not, set the input selector to **VIDEO IN** either manually or remotely (by the video deck's remote commander or the **INPUT SELECT** button on the screen).

- 6 Click on ● **REC** of the video recording unit.
Recording starts.



Notes

- There is no video output from the video recording unit even though all buttons on the video recording unit's control panel are operational.
- If you click on another program source during recording, the tape recording stops and the selected source will start playing.

- 7 Click on ► of the video source.
Dubbing starts.

To stop dubbing

Click on ■ of video recording unit.

To leave the video dubbing menu

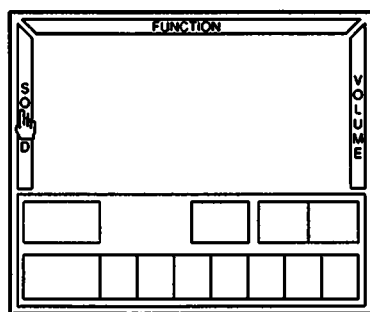
Click on **EXIT**.

Preparing Your Space for Dolby Surround Sound

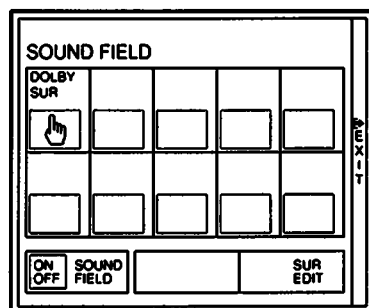
The STR-G1ES's Dolby Prologic Surround Decoder reproduces the Dolby surround sound code available on some entertainment software to produce the same dynamic sound normally available only in movie theaters. In this procedure, you will maximize the Dolby surround sound effect by:

- 1 specifying the Dolby surround mode for your speaker configuration
- 2 adjusting the speaker volume level
- 3 adjusting the delay time of the rear speakers.

- 1** Click on **SOUND** in the main menu.
The **SOUND FIELD** menu appears.



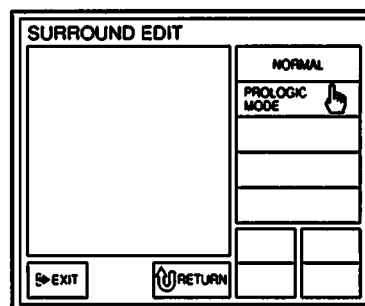
- 2** Click on **DOLBY SUR**, then on **SUR EDIT**.
The **SURROUND EDIT** menu appears.



To return to the main menu, click on **EXIT**.

- 3** Select the Dolby surround sound mode by clicking on **PROLOGIC MODE**.

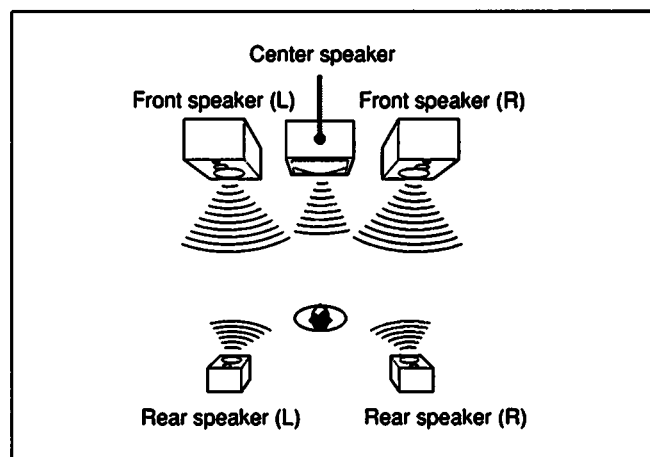
Each click selects **NORMAL**, **WIDE**, **PHANTOM**, or **3CH. LOGIC** mode.



Four possible Dolby surround sound modes

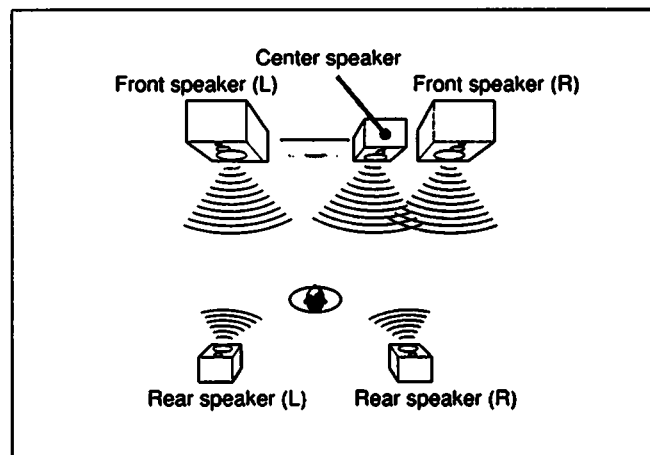
NORMAL mode

Select this mode when using a small center speaker (e.g., the TV speaker). The front speakers output the bass sound of the center channel since the small speaker produces insufficient bass.



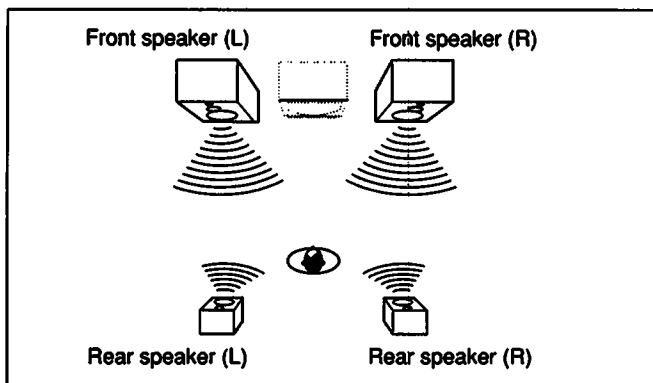
WIDE mode

Select this mode when using a medium to large center speaker.



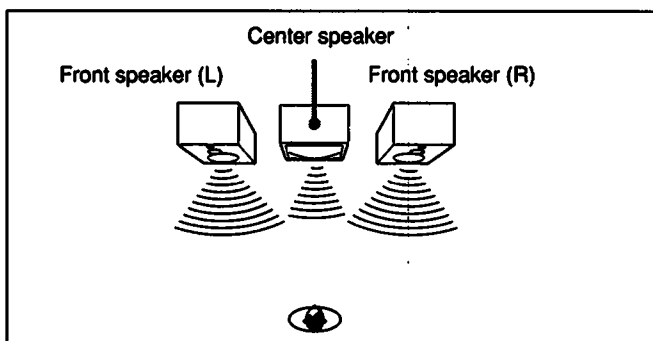
PHANTOM mode

Select this mode when not using a center speaker. The front speakers output the sound of the center channel.



3CH. (Channel) LOGIC mode

Select this mode when using only front and center speakers. The front speakers output the sound of the rear channel.

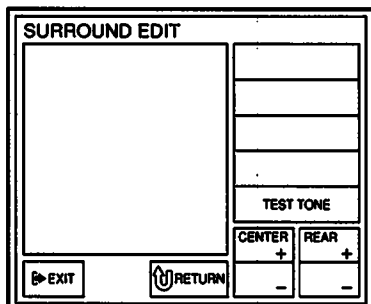


Note

Some commercially available software may have Dolby surround sound tracks even when this is not indicated on the package.

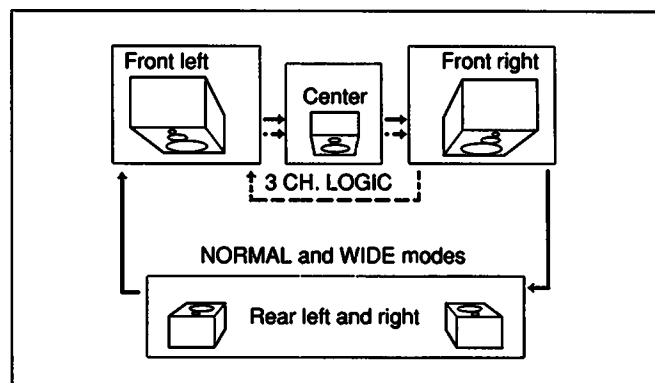
4 Adjust the speaker volume by clicking on TEST TONE.

TEST TONE changes to ON and a test tone is sequentially emitted from each speaker. See below for the respective tone sequence of your speaker configuration.



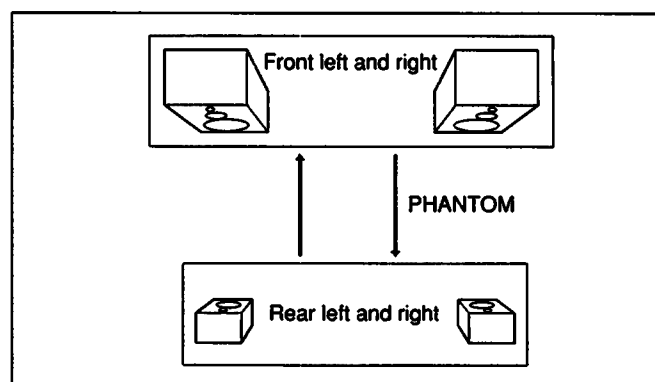
Test tone sequence with center speaker

The test tone moves clockwise from the front-left speaker to the rear speakers, then back to the front-left speaker.



Test tone sequence without center speaker

The test tone alternates between the front speakers and the rear speakers.



5 Equalize the volume of all speakers.

Click on CENTER + or CENTER - to adjust the volume of the front speaker and REAR + and REAR - to adjust the volume of the rear speakers.

6 Click on TEST TONE.

TEST TONE changes to OFF and the test tone stops.

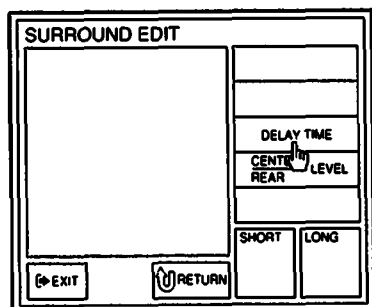
(Continued on next page.)

Preparing Your Space for Dolby Surround Sound

(Continued from previous page.)

7 Adjust the delay time by clicking on DELAY TIME while listening to a program source.

Click on SHORT or LONG to adjust the delay time.



To leave the menu

Click on EXIT.

To go to the previous menu

Click on RETURN.

To adjust the volume level of the center and rear speakers

Click on CENTER/REAR LEVEL, then click on the + or - button for each set of speakers.

Adjusting a Sound Field Program

The digital signal processor in the STR-G1ES consists of two parts: (1) a digital surround processor which electronically reproduces the acoustics of various listening environments, and (2) a digital parametric equalizer which controls the output level of specific frequency ranges. These parts function together to create the acoustic qualities of specific listening environments (sound fields).

The unit comes with 10 factory-set sound fields, each with varying digital surround processor and parametric equalizer parameters tailored for specific types of music (i.e., jazz or opera) or listening situations (i.e., church or stadium). A number of adjustable parameters, such as room size and seat position, also allow you to customize each sound field to your own taste.

Description of Sound Fields

Sound Field	Characteristics	Applicable music source
DOLBY SUR	Decodes programs processed with the Dolby surround effect.	Dolby surround encoded software
THEATER	Adds the reflections of a theater to decoded signals of the Dolby prologic decoder.	Dolby surround encoded movie software
LIVE	Adds the reflections of a large concert hall to decoded signals of the Dolby prologic decoder.	Dolby surround encoded music software
HALL	Reproduces the acoustics of a rectangular concert hall with soft sound. It is effective for playing a program source with hard sound.	Orchestral music, chamber music, or an instrumental solo
DANCE	The equalizer boosts high and low frequencies, and dynamic sounds are reproduced.	Pop or dance music
JAZZ	Reproduces the acoustics of a live house. The equalizer boosts high frequencies, adding sharpness to sounds.	Jazz
OPERA	Reproduces the acoustics of an opera house, maintains clearness of vocals.	Opera
CHURCH	Reproduces the acoustics of a church made of wood.	Baroque music, string orchestra or choral group
STADIUM	Reproduces the acoustics of an outdoor stadium with a long pre-delay time. It is effective for playing a program source recorded in a stadium.	Pop or rock music
ACOUSTIC	The surround effect is off.	

Sound Field Setting

The following table shows the parameters that can be adjusted for each sound field.

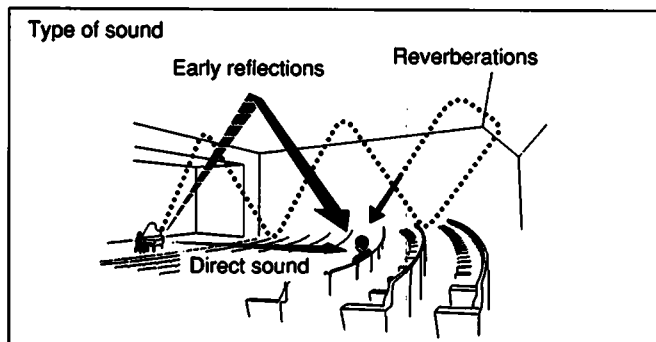
SOUND FIELD		DOLBY SUR	THE-ATER	LIVE	HALL	DANCE	JAZZ	OPERA	CHURCH	STADIUM	ACOUSTIC
Equalizer		O	O	O	O	O	O	O	O	O	O
Digital surround processor parameters	Room size	X	O	O	O	O	O	O	O	O	X
	Wall	X	O	O	O	O	O	O	O	O	X
	Seat position front/rear	X	O	O	O	O	O	O	O	O	X
	Seat position left/right	X	O	O	O	O	O	O	O	O	X
	Effect level	X	O	O	O	O	O	O	O	O	X
	Reverb time	X	O	O	O	O	O	O	O	O	X
	Delay time	O	X	X	X	X	X	X	X	X	X
	Rear level	O	O	O	O	O	O	O	O	O	X
	Center level	O	O	O	X	X	X	X	X	X	X

O: adjustable X: non-adjustable

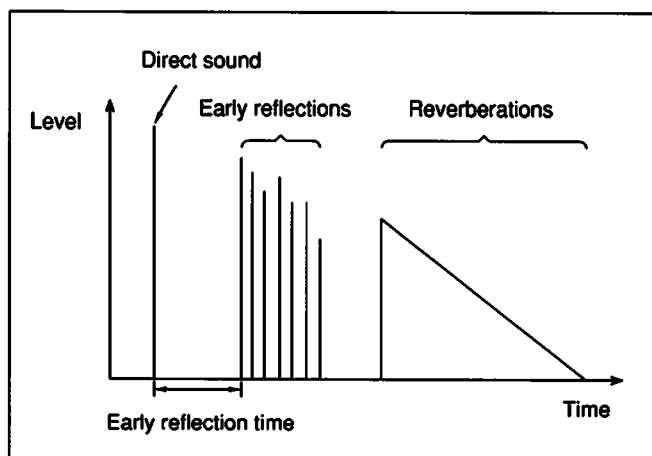
How the Digital Surround Processor Works

Sounds that you hear within an enclosed space such as a movie theater or concert hall can be classified as direct sound, reflected sound (early reflections) or reverberative sound (reverberation). When we hear these sounds, we get a sense of the size and type of the space.

By reproducing early reflections, reverberation and other sound characteristics, the digital surround processor recreates the acoustics of particular spaces. When combined with the digital equalizer, unique "sound fields" can be produced.



The transition over time of direct sound, early reflections, and reverberation can be graphed as follows:



Note

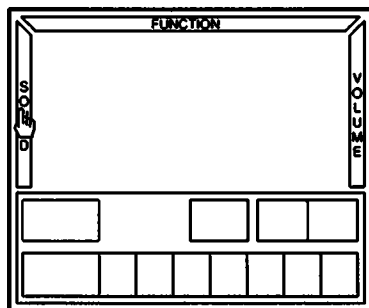
Since each sound field is determined by both fixed and adjustable parameters, sound fields will not sound the same even when all adjustable parameters are equal.

Adjusting a Sound Field Program

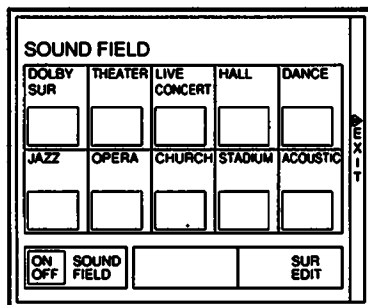
Your STR-G1ES comes with ten preset sound fields. Adjustable parameters (digital equalizer and digital surround) are also provided to allow each sound field to be customized. Use the two following procedures to adjust the digital surround parameters and digital equalizer parameters. Before starting the procedure, you must play back a program source so that you can monitor the sound while making the adjustments. The specified sound field is linked to the program source (except for the TAPE function) and is activated whenever the program source is selected.

Adjusting the Digital Surround Parameters

- 1 While playing a program source, click on SOUND in the main menu.**
The SOUND FIELD menu appears.



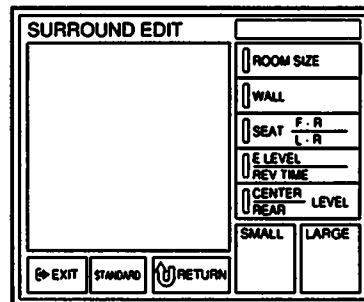
- 2 Click on a sound field.**
Make sure that SOUND FIELD is on. If not, click on the button to turn it on.
Once a sound field has been selected, all changes made to its parameters are automatically saved.



To return to the main menu, click on EXIT.

- 3 Click on SUR EDIT.**
The SURROUND EDIT menu of the respective sound field appears.

- 4 Click on the parameter to be changed.**
For a description of the digital surround parameters, see page 29.



- 5 Adjust the parameter.**
Depending on the parameter, use the SMALL/LARGE, SOFT/HARD, arrows or +/- buttons to make the adjustment.
Clicking on STANDARD restores all sound field parameters (digital surround and digital equalizer) to their factory settings and returns the volume level of center and rear speakers to 0 dB.

Note

You may hear some noise as you adjust the parameters.

To leave the menu

Click on EXIT.

To return to the previous menu

Click on RETURN.

Tips for adjusting the parameters

For more efficient parameter adjustments, follow the sequence below when customizing a sound field.

- 1 Select the preset sound field.
- 2 Adjust the effect level (E.LEVEL).
- 3 Adjust the reverberation time (REV.TIME).
- 4 Adjust other parameters if necessary.

Even if the AC power cord is disconnected

Stored sound field data are maintained for about two weeks.

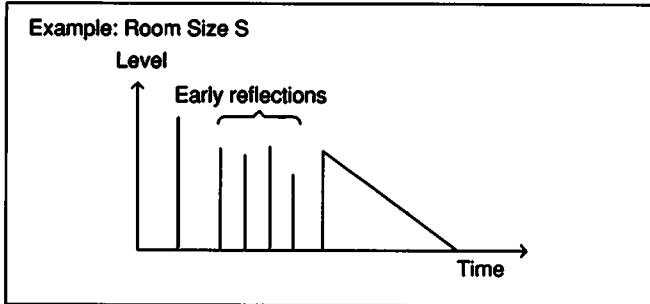
If you select ACOUSTIC

This sound field has no adjustable digital surround sound parameters. Only the digital parametric equalizer can be adjusted. See "Adjusting the Digital Parametric Equalizer" on page 32.

■ Room Size Simulation

The sound emitted from a sound source is reflected many times between the left and right walls, ceiling, and floor before it reaches our ears. In a large room, the sound takes more time to bounce from one surface to another than in a smaller room.

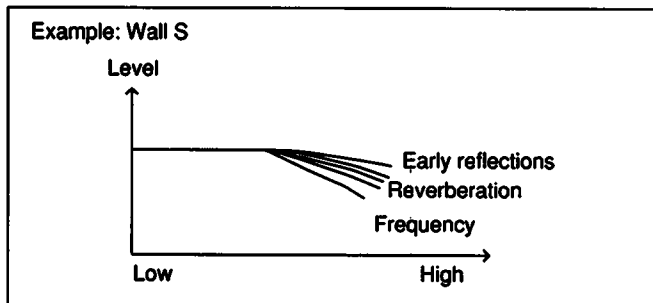
The ROOM SIZE parameter controls the spacing of early reflections to simulate the room size.



■ Wall Material Simulation

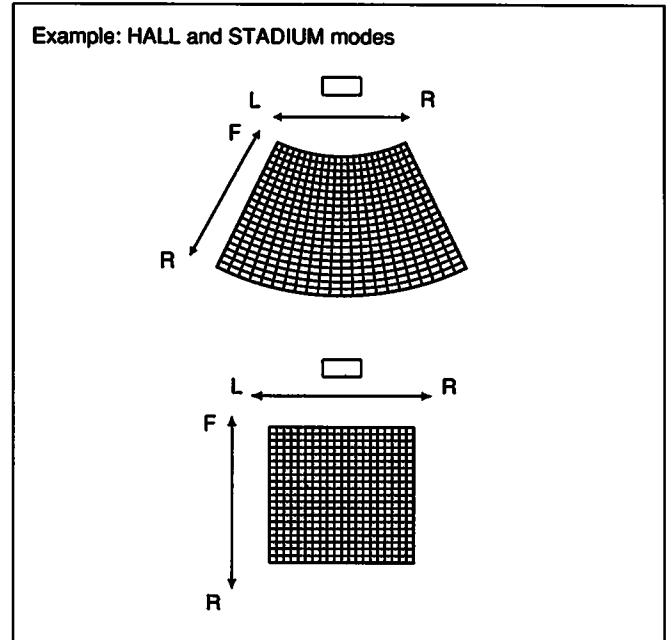
When sound is reflected by a wall made of soft material such as wood or a wall covered with a curtain, the high frequency components are reduced. A hard wall is highly reflective and does not significantly effect the frequency response of the reflected sound.

The WALL parameter controls the level of high frequencies to simulate the wall material.



■ Seat Position Simulation

When you sit at the front of a room, you will hear more direct sound from the front speakers, and the component of reflected sounds from the front speakers grows as you move to the rear. Similarly, the component of reflected sound changes when you move from left to right, and vice versa. The F-R and L-R parameters control the balance of the direct and reflected sound and other components of sound to simulate your listening position.



■ Effect Level

Effect level is the combination of the level of early reflections and reverberations. The adjustable level is divided into 20 segments. As you select higher levels, the room becomes more "live", and as you select lower levels, the room becomes more "dead".

■ Reverberation Time

This parameter adjusts the length of the reverberation — the time required for reverberative sound to decrease to -60 dB.

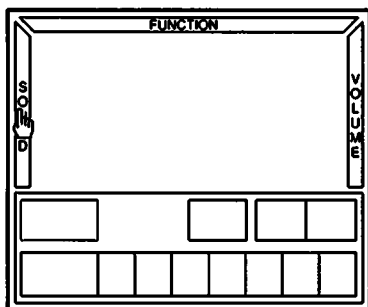
Adjusting a Sound Field Program

Adjusting the Digital Parametric Equalizer

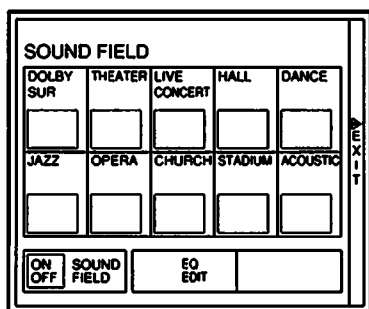
The parametric equalizer is a tone control system with adjustable center frequency and slope.

The unit provides flexible equalization using one-band parametric equalizer with center frequency and slope, and 2-band shelving equalizers with adjustable turnover points. Before adjusting the digital parametric equalizer, play back the program source. You can adjust the equalizer while listening to the actual sound.

- 1** While playing a program source, click on **SOUND** in the main menu.
The **SOUND** menu appears.



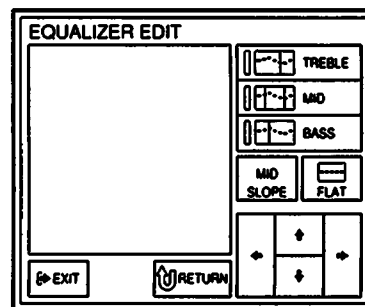
- 2** Click on a sound field.
Make sure that **SOUND FIELD** is on. If not, click on the button to turn it on.



To return to the main menu, click on **EXIT**.

- 3** Click on **EQ EDIT**.
The **EQUALIZER EDIT** menu appears.

- 4** Click on **TREBLE**, **MID** or **BASS** to adjust the frequency.
The graph for the selected frequency band appears.



- 5** Click on **←** or **→** to select the frequency to be adjusted.
Click on **↑** or **↓** to raise or lower the level of the selected frequency.

Note

You may hear some noise as you adjust the parameters.

- 6** Click on **MID SLOPE** if you want to adjust the center frequency band (**MID**).
Each click selects **WIDE**, **MIDDLE** or **NARROW**.

- 7** Repeat steps 4 through 6 to adjust other frequency bands.

To leave the menu

Click on **EXIT**.

To return to the previous menu

Click on **RETURN**.

To begin adjusting with a flat equalization curve

Click on **FLAT** to flatten the curve.

If the center frequency band overlaps the bass or treble frequency band during adjustment

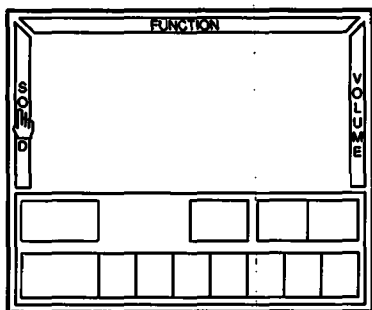
The level of both bands are added together.

The display of the equalization curve level is limited to $\pm 10\text{dB}$.

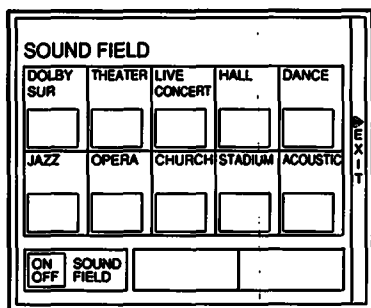
Changing the Sound Field

Once a sound field is selected for a program source, including preset stations (see "Selecting a Preset Sound Field" on page 18), the sound field is activated each time you select the source (except for the TAPE function). Follow the procedure below to change the sound field linked to a given program source.

- 1 While playing the program source, click on SOUND in the main menu.**
The SOUND FIELD menu appears.



- 2 Click on the new sound field.**
The sound field is activated.
Make sure that SOUND FIELD is on. If not, click on the button to turn it on.

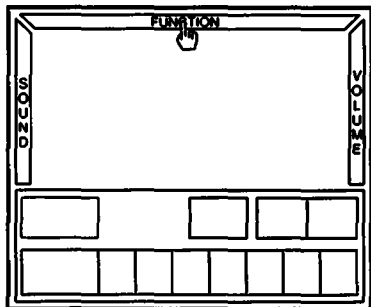


To return to the main menu, click on EXIT.
To customize the digital surround parameters, see "Adjusting the Digital Surround Parameters" on page 30.

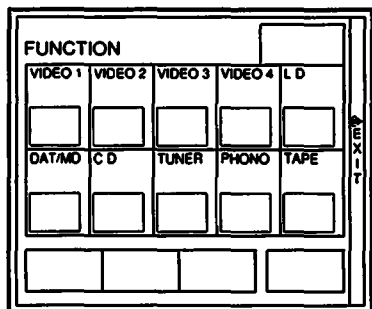
Enjoying Two Program Sources at the Same Time

Use the procedure below to play two program sources at the same time (for example, to play a laser disc while listening to a compact disc). Before starting the procedure, make sure that the AUTO PLAY function is off (see the following section, "Starting Program Sources Automatically — AUTO PLAY").

- 1 Click on **FUNCTION** in the main menu.
The FUNCTION menu appears.



- 2 Click on a video program source.
The control panel appears.
Click on the buttons to operate the video source.



To return to the main menu, click on EXIT.

- 3 Click on **FUNCTION**, then click on an audio program source.
The control panel appears.
Click on the buttons to operate the audio source.

To stop play

Click on the stop button of the respective program source.

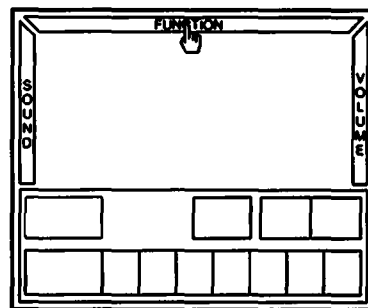
Note

If you do not turn off the AUTO PLAY function, the newly selected program source starts playing and previously selected program source stops.

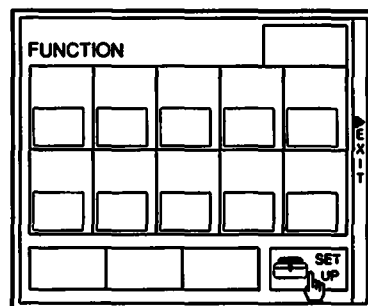
Starting Program Sources Automatically — AUTO PLAY

When AUTO PLAY is on, program sources will start playing immediately when you select them.

- 1 Click on **FUNCTION** in the main menu.
The FUNCTION menu appears.

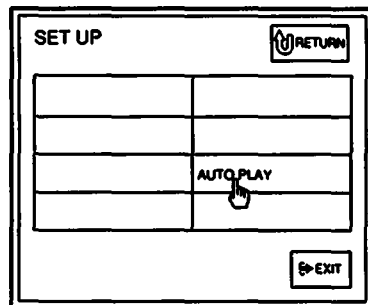


- 2 Click on **SET UP**.
The SET UP menu appears.



To return to the main menu, click on EXIT.

- 3 Click on **AUTO PLAY**.
Clicking on AUTO PLAY alternately turns AUTO PLAY on and off.



To leave the menu

Click on EXIT.

To return to the previous menu

Click on RETURN.

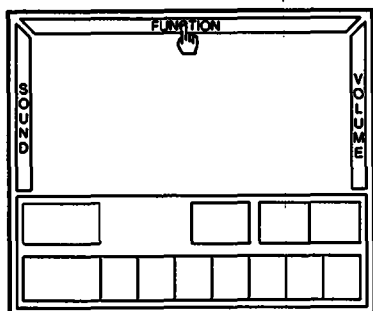
Notes

- If you select a program source while another is playing, the current program source stops, and the newly selected program source starts playing.
- The AUTO PLAY function does not work when you operate the unit from its front panel.

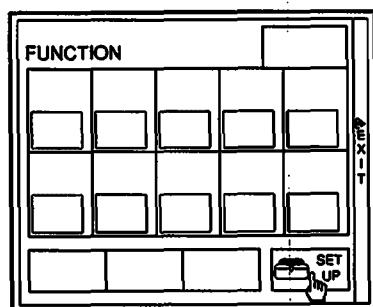
Starting a Specified Program Source Automatically — POWER ON AUTO START

After specifying the program source with POWER ON AUTO START, the program source will automatically turn on and start playing when you turn on the unit with the remote commander.

- 1 Click on **FUNCTION** in the main menu.
The **FUNCTION** menu appears.

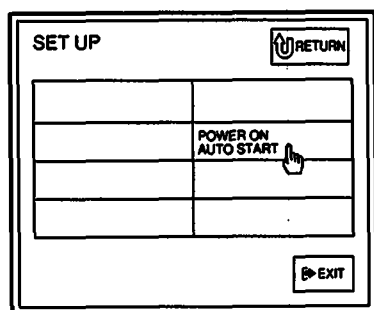


- 2 Click on **SET UP**.
The **SET UP** menu appears.

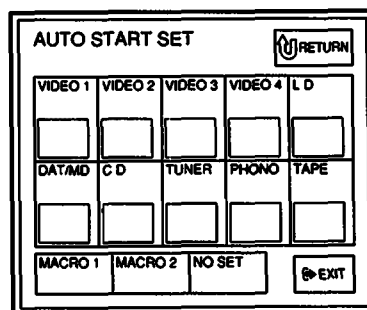


To return to the main menu, click on **EXIT**.

- 3 Click on **POWER ON AUTO START**.
The **AUTO START SET** menu appears.



- 4 Click on the program source to start playing automatically.
Only one menu item can be selected at a time (including **MACRO1** or **MACRO2**).



To clear the AUTO START SET menu setting
Click on **NO SET**. The **POWER ON AUTO START** function does not operate when you turn on the unit.

To leave the menu
Click on **EXIT**.

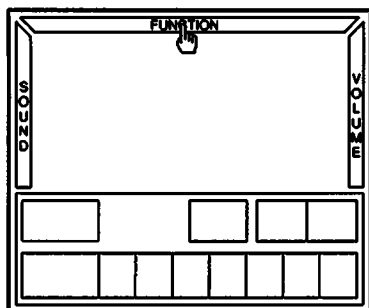
To return to the previous menu
Click on **RETURN**.

Note
The **POWER ON AUTO START** function does not work when you operate the unit from its front panel.

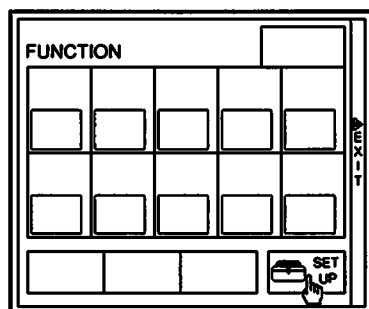
Storing Other Manufacturers' Infrared Command Codes — CUSTOM IR CODE SET

Use the CUSTOM IR CODE SET menu to store infrared command codes that do not appear in the AUDIO/VIDEO IR CODE SET menu. These include codes for audio, video and other equipment made by manufacturers other than Sony. In the procedure below, you will enter the name of the code, then record the IR code itself. Up to 20 codes can be recorded.

- 1 Click on **FUNCTION** in the main menu.
The FUNCTION menu appears.

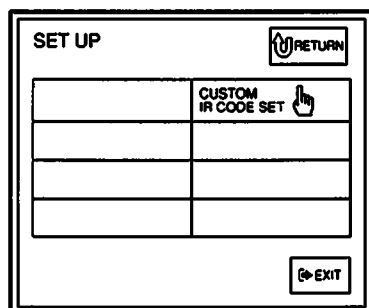


- 2 Click on **SET UP**.
The SET UP menu appears.

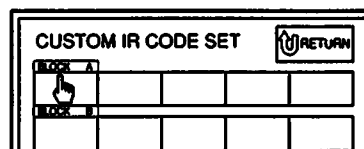


To return to the main menu, click on EXIT.

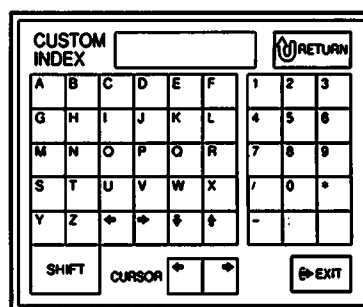
- 3 Click on **CUSTOM IR CODE SET**.
The CUSTOM IR CODE SET menu appears.



- 4 Click on an empty button.
The button is selected, and the CUSTOM INDEX menu appears.



- 5 Spell out the name by clicking on each character.
After clicking, the character appears in the box after CUSTOM INDEX.

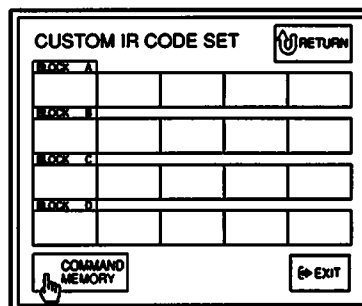


To correct an entered character, click on ← or → to highlight the character, then click on the correct character. To erase an entered character, click on ← or → to highlight the character, then click on the blank button.

To change the character set, click on SHIFT. Each click selects uppercase letters or lowercase letters.

- 6 After entering the name, click on **RETURN**.
The CUSTOM IR CODE SET menu reappears.
Repeat steps 4 through 6 until you enter all the names of the IR codes you will record.

- 7 Click on **COMMAND MEMORY**.
The CUSTOM IR CODE menu appears.

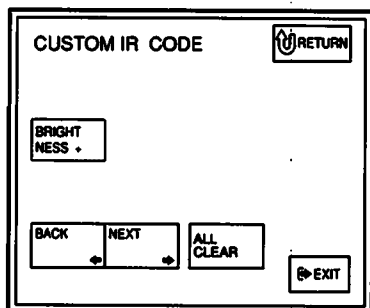


Note

When recording the infrared command codes of electrical equipment, keep the original equipment off, or cover its remote control sensor.

8 Follow the instructions on the TV screen to record the IR code.

Point the respective remote commander at the words "VisionTouch" on the left side of the front panel at a distance of about 12 inches (30 cm) and hold down the commander code to be recorded.



At most, 5 seconds are required for recording the IR code.

If nothing happens after 5 seconds, click once on NEXT, then on BACK, then try to record the IR code again with the remote commander closer to the unit.

OK appears on the screen when the IR code has been successfully recorded.

Note

Click on ALL CLEAR to erase all recorded IR codes.

To leave the menu, click on EXIT.

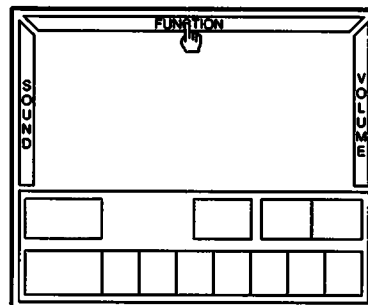
To return to the previous menu, click on RETURN.

Notes

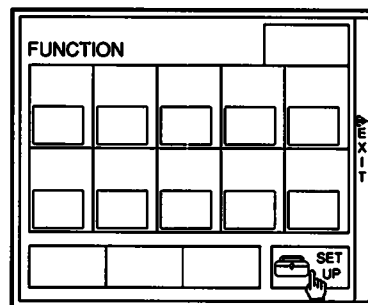
- The power switch on air conditioners may use two independent codes, even when there is only one switch. If you cannot turn the air conditioner off with the code recorded for the on/off switch, repeat the procedure and record the on and off codes separately.
- The unit may not be able to record IR codes with special waveforms produced on some remote commanders.
- If you discover later that a code was not successfully recorded (even if "OK" appeared at the time), try recording the code again at a distance between about 8 and 24 inches (20 to 60 cm) from the unit.

A macro is a command that can activate up to ten IR command codes in sequential order. You can create two macros consisting of codes from the IR code set or user IR code set. Macros can be activated manually through the FUNCTION menu or by the POWER ON AUTO START function.

1 Click on FUNCTION in the main menu. The FUNCTION menu appears.

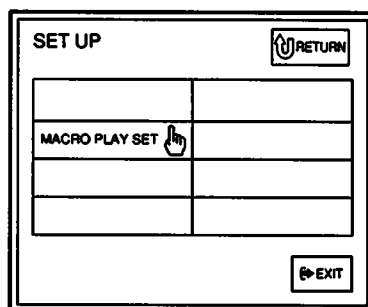


2 Click on SET UP. The SET UP menu appears.



To return to the main menu, click on EXIT.

3 Click on MACRO PLAY SET. The MACRO PLAY SET menu appears.

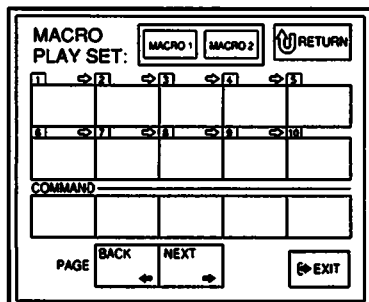


(Continued on next page.)

Starting Program Sources and Other Electrical Equipment Automatically and Sequentially — MACRO PLAY SET

(Continued from previous page.)

- 4 Click on MACRO1 or MACRO2.**
The selected macro lights up.



- 5 Click on button "1".**
The number indicates the sequence in which the command code will be executed.

- 6 Click on BACK or NEXT to display the selectable command codes in the COMMAND buttons.**
Clicking on the button causes different command codes in the CUSTOM IR CODE SET and program sources in the FUNCTION menu to appear.
To specify a time lag between the end of one program source and the start of another, click on NEXT until the required time lag appears among the COMMAND buttons (i.e., WAIT 5 SEC, WAIT 10 SEC, etc.).

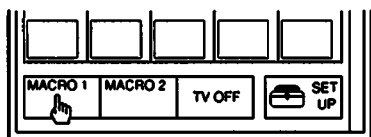
- 7 Click on a command code from among the COMMAND buttons.**
The name of the selected command code appears on the numbered button, and the next numbered button lights up. Repeat this procedure until you enter all the command codes you want. To erase a command code, click on the respective numbered button, then on the NEXT button until NO SET appears among the COMMAND buttons. The command code is erased when you click on the NO SET.

To leave the menu, click on EXIT.

To return to the previous menu, click on RETURN.

To enter command codes randomly, click on the numbered button, then on the command code.

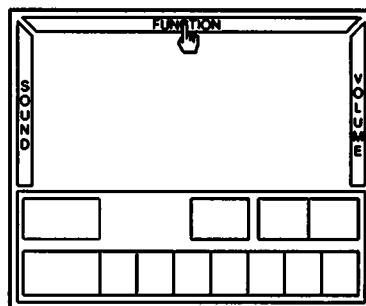
You can activate the MACRO function by clicking on MACRO1 or MACRO2 in the FUNCTION menu.



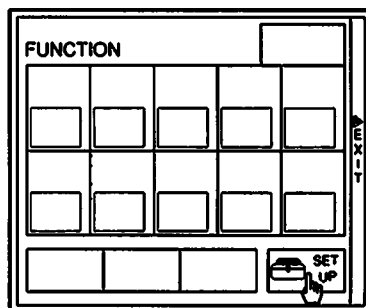
Selecting the Pointer Type and Display Color — DISPLAY MODE

Use the DISPLAY MODE menu to select from three types of pointers and four display colors.

- 1 Click on FUNCTION in the main menu.**
The FUNCTION menu appears.

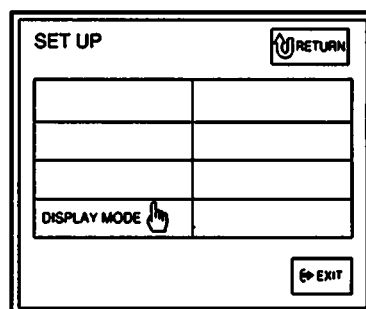


- 2 Click on SET UP.**
The SET UP menu appears.



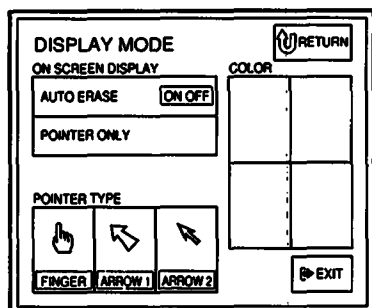
To return to the main menu, click on EXIT.

- 3 Click on DISPLAY MODE.**
The DISPLAY MODE menu appears.



Specifying the Sensitivity of the Remote Commander — COMMANDER SENSITIVITY

- 4 Click on an ON SCREEN DISPLAY button.**
These buttons determine the display mode.



AUTO ERASE:

When ON, this function causes the control panel to disappear after you activate any of the IR control code operation buttons by pressing and holding down the remote commander button. When you release the button, the control panel reappears. This display mode is convenient for seeing chapter numbers during laser disc operations.

POINTER ONLY:

By clicking on POINTER ONLY, the on-screen display disappears except for the pointer and EXIT button. To freeze the pointer, hold down the button on the remote commander. To restore the DISPLAY MODE menu, click on EXIT.

This display mode is useful when using the pointer to point to specific display items during presentations.

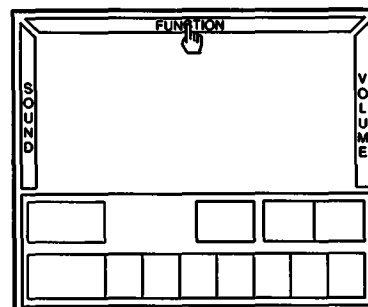
- 5 Click on a COLOR button.**
These buttons determine the display color.

To leave the menu
Click on EXIT.

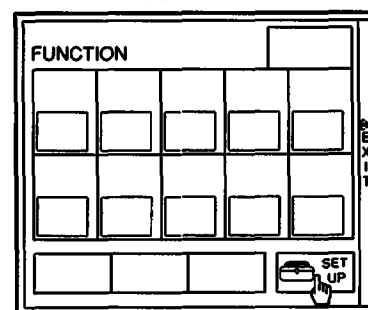
To return to the previous menu
Click on RETURN.

You can select three sensitivity levels that determine the speed at which the pointer moves.

- 1 Click on FUNCTION in the main menu.**
The FUNCTION menu appears.

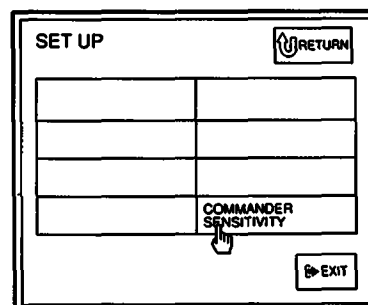


- 2 Click on SET UP.**
The SET UP menu appears.



To return to the main menu, click on EXIT.

- 3 Click on COMMANDER SENSITIVITY.**
The selected number increases by one with each click, raising the commander's sensitivity accordingly.



Note

If you find it difficult to change the commander sensitivity because the setting is too high (i.e., 5), turn off the unit, then turn on the power while holding down the VIDEO2 and VIDEO4 buttons.

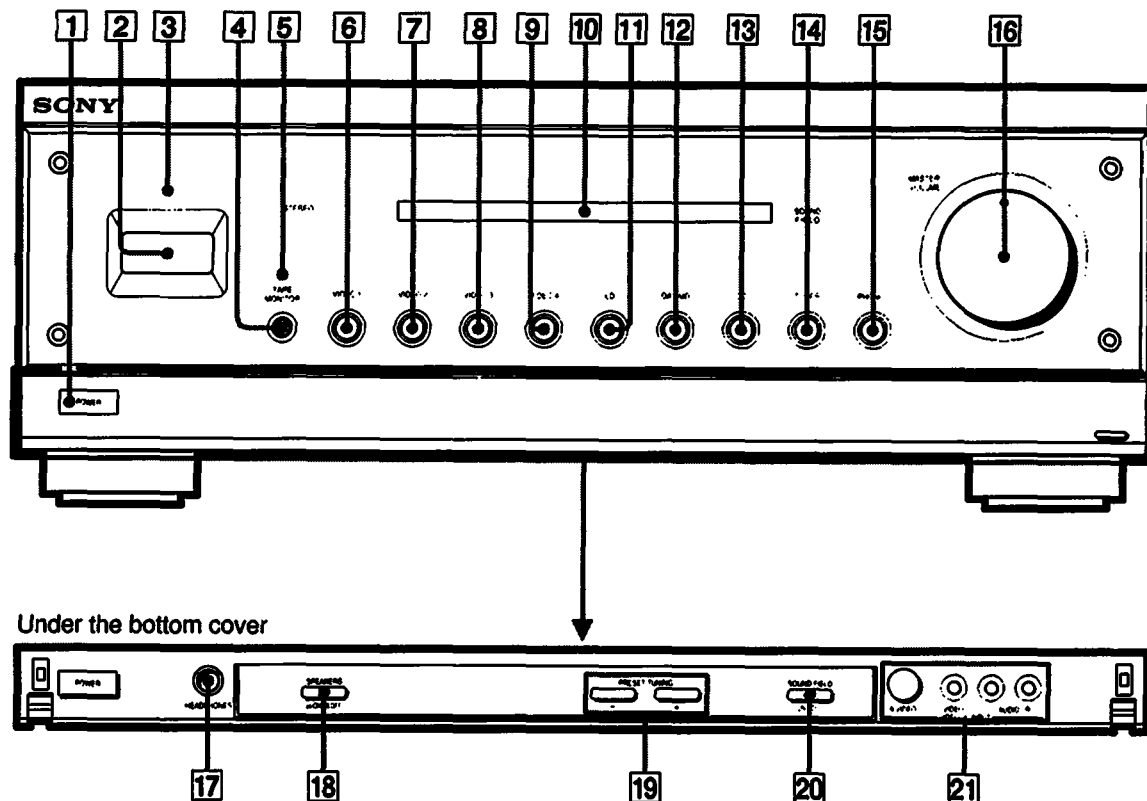
The commander sensitivity will return to a lower factory-set value.

To leave the menu
Click on EXIT.

To return to the previous menu
Click on RETURN.

Identifying the Parts and Controls

Front Panel



- 1 POWER switch**
- 2 Infrared emitter and sensor**
Emits and receives infrared signal commands.
- 3 IR (InfraRed) emitter indicator**
Lights up when the unit sends out an infrared signal.
- 4 TAPE MONITOR button**
Press to monitor the original sound while recording a program source.
- 5 TAPE MONITOR indicator**
Lights up during tape monitoring.
- 6 VIDEO1**
Selects the video unit connected to the VIDEO1 connectors (playback and recording).
- 7 VIDEO2**
Selects the video unit connected to the VIDEO2 connectors (playback and recording).
- 8 VIDEO3**
Selects the video unit connected to the VIDEO3 connectors (playback only).
- 9 VIDEO4**
Selects the 8mm video unit connected to VIDEO4 connectors (playback only).
- 10 Display**
Shows the functions or the tuning frequency etc..
- 11 LD (Laser Disc)**
Selects the laser disc player connected to the LD connectors.
- 12 DAT/MD (Digital Audio Tape/MiniDisc)**
Selects the DAT deck or MiniDisc recorder connected to the DAT/MD connectors.
- 13 CD (Compact Disc)**
Selects the compact disc player connected to the CD connectors.
- 14 TUNER (pages 21, 22, 23)**
Selects the tuner.
- 15 PHONO**
Selects the phono player connected to the PHONO connectors.
- 16 MASTER VOLUME (page 17)**
Turn to adjust the volume.
- 17 HEADPHONES**
Connects stereo headphones.
- 18 SPEAKERS (ON/OFF)**
Press to turn the speakers on or off.
- 19 PRESET TUNING (- / +) (pages 21, 22, 23)**
Press to select preset radio stations.
- 20 SOUND FIELD (ON/OFF)**
Press to turn the selected sound field on and off.
- 21 VIDEO4 INPUT jacks**
For connecting input from an 8mm video unit.

Specifications

Audio Power Specifications

**For the customers in the U.S.A.
POWER OUTPUT AND TOTAL HARMONIC
DISTORTION:**

**With 8 ohm loads both channels driven,
from 20 - 20,000 Hz; rated 80 watts per
channel minimum RMS power, with no
more than 0.04 % total harmonic distortion
from 250 milliwatts to rated output.**

	Surround mode (8 ohms)
FRONT (at 20 Hz - 20 kHz)	85 W + 85 W
CENTER* (at 20 Hz - 20 kHz)	85 W
REAR (at 1 kHz)	20 W + 20 W

* Only in the DOLBY SUR, THEATER and LIVE modes.

Other Specifications

Amplifier section (front)

Continuous RMS power (at 20 Hz-20 kHz)

8 ohms: 85 W + 85 W

4 ohms: 80 W + 80 W

Dynamic power output (in the stereo mode)	8 ohms, at 1 kHz IHF	120 W + 120 W
	4 ohms, at 1 kHz IHF	175 W + 175 W
	2 ohms, at 1 kHz IHF	205 W + 205 W
Frequency response	PHONO	RIAA equalization curve ± 0.5 dB
	CD, DAT/MD, TAPE, VIDEO 1,2,3,4, LD	10 Hz - 20 kHz ± 3 dB
Damping factor (8 ohms, at 1kHz)		50
Input sensitivity/impedance	PHONO MM	2.5 mV, 50 kilohms
	CD, DAT/MD, TAPE, VIDEO 1,2,3,4, LD	250 mV 50 kilohms
	MAIN IN	1 V, 50 kilohms
S/N	PHONO MM	87 dB 79 dB** (A, 2.5mV)
	CD, DAT/MD, TAPE, VIDEO 1,2,3,4, LD	105 dB 85 dB** (A, 150mV)

** '78 IHF

Output sensitivity/impedance	DAT/MD, TAPE, VIDEO 1,2	250 mV 10 kilohms
	HEADPHONES	Accepts headphones of high and low impedance
	SURROUND OUT REAR	1 V, 1 kilohm
	SURROUND OUT CENTER	1 V, 1 kilohm
	SURROUND OUT MONO	1 V, 1 kilohm
	PRE OUT	1 V, 1 kilohm
MUTING		-20 dB
DBFB		+10 dB at 70 Hz
LOW FILTER		90 Hz, 12 dB/oct

Digital signal processor section

Modulation (A/D conversion)		High Density Linear Converter
Demonstration (D/A conversion)		High Density Linear Converter (Pulse D/A Converter)
Sampling frequency		48 kHz
Equalizer	Band	3-band, Bass/Treble/Mid
	Turnover frequency	Bass: 125 Hz - 1 kHz Treble: 1 kHz - 8 kHz
	Center frequency	Mid: 54 Hz - 8 kHz
	Level	± 10 dB, 1 dB step
	Slope (Q)	3-step selectable, Wide, Mid, Narrow
Surround	ROOM SIZE	16-step adjustable
	WALL	16-step adjustable
	SEAT POSITION F/R	16-step adjustable
	SEAT POSITION L/R	16-step adjustable
	EFFECT LEVEL	20-step adjustable
	REVERB TIME	16-step adjustable
	DELAY TIME***	15.0 ms - 30.0 ms, 0.1 ms step
	REAR LEVEL	-50 to +10 dB, 1 dB step
	CENTER LEVEL****	-50 to +10 dB, 1 dB step
	INPUT BALANCE****	Automatic

*** Only in the DOLBY SUR mode.

**** Only in the DOLBY SUR, THEATER and LIVE modes.

(Continued on next page.)

Specifications

(Continued from previous page.)

FM tuner section

Frequency range	87.5 – 108.0 MHz	
Antenna terminals	75 ohms, unbalanced	
Sensitivity at 50 dB	18.3 dBf, 4.5 μ V (mono) 38.3 dBf, 45 μ V (stereo)	
Usable sensitivity	11.2 dBf, 2 μ V (IHF)	
S/N	Mono	80 dB
	Stereo	74 dB
Harmonic distortion at 1 kHz	Mono	0.3 %
	Stereo	0.5 %
IM distortion	Mono	0.3 %
	Stereo	0.5 %
Separation	45 dB at 1 kHz	
Frequency response	30 Hz – 15 kHz ± 3 dB	
Selectivity	60 dB at 400 kHz	
Capture ratio	1.2 dB	
AM suppression ratio	54 dB	
Image response ratio	70 dB	
IF response ratio	70 dB	
Spurious response ratio	80 dB	
RF intermodulation at 800 kHz	60 dB	
Auto tuning threshold	30 dBf	

AM tuner section

Frequency range	530 – 1,710 kHz (with 10 kHz interval) 531 – 1,710 kHz (with 9 kHz interval)
Antenna	Loop antenna
Usable sensitivity	50 dB/m (at 1,000 kHz or 999 kHz)
S/N	54 dB (at 50 mV/m)
Harmonic distortion	0.5% (50 mV/m, 400 Hz)
Selectivity	35 dB (9 kHz), 40 dB (10 kHz)
Auto tuning threshold	55 dB/m

Video section

Inputs	VIDEO 1,2,3,4, LD: 1 Vp-p 75 ohms	
Outputs	VIDEO 1,2, MONITOR: 1 Vp-p 75 ohms	
S VIDEO INPUT	VIDEO 1,2,3,4, LD	Luminance: 1 Vp-p 75 ohms Chrominance: 0.286 Vp-p 75 ohms
S VIDEO OUT	VIDEO 1,2, MONITOR	Luminance: 1 Vp-p 75 ohms Chrominance: 0.286 Vp-p 75 ohms

General

System	Tuner section	PLL quartz-locked digital synthesizer system
	Power amplifier section	Pure-complimentary SEPP
Power requirements		120 V AC, 60 Hz
Power consumption (during standby: 5W)		U.S.A. model: 300 W Canada model: 430 VA
AC outlets		Three switched, total 120 W/1A max.
Dimensions (including projecting parts and controls)		Approx. 430 x 148 x 397 mm (w/h/d) (17 x 5 ¹³ / ₁₆ x 15 ³ / ₄ inches)
Mass		Approx. 14.0 kg (30 lb 14 oz)

Supplied accessories

FM wire antenna (1)
AM loop antenna (1)
Remote commander (RM-VP1) (1)
Sony batteries SUM-3(NS) (2)
Remote Control (RC) antenna (1)
IR repeater (1)
Quick reference guide (1)

Design and specifications are subject to change without notice.

Troubleshooting Guide

Before proceeding through the check list below, examine the connections and the procedures outlined in the manual. Should any problem persist after you have checked the following items, consult your nearest Sony dealer.

Problem	Cause	Remedy
No FM station can be located by Automatic Tuning operation.	The signal strength of the stations is too weak.	Check the antenna connection. (See page 6.)
The STEREO indicator flickers or does not appear when receiving stereo programs.	A very weak FM station or a noisy FM program is received.	Adjust the antenna or connect an external FM antenna. (See page 6.)
No station can be tuned in by Automatic Tuning operation.	The AM tuning interval is set incorrectly.	Change the tuning interval according to the AM frequency allocation system of your country. (See page 21.)
	The signal strength of the station is too weak for Automatic Tuning.	Adjust the antenna or move the antenna away from the TV set or the unit.
No stations can be tuned in by pressing PRESET TUNING +/-.	No stations have been preset.	Preset the stations. (See page 22.)
No sound is heard even if you adjust VOLUME.	The speaker or program source equipment is not connected correctly.	Connect the equipment correctly. (See pages 8, 9, 10.)
	TAPE has been pressed for a program source other than tape deck. (The indicator is lit.)	Press the button to disengage.
	A wrong function selector has been pressed.	Press the correct function selector.
No sound or sound at very low level is heard from rear speakers.	SOUND FIELD function is turned off.	Press SOUND FIELD to turn on the function.
	ACOUSTIC is selected in the SOUND FIELD menu.	Select another sound field.
	Monaural program source is played back in Dolby surround mode.	Select the other modes.
Sound is heard only at a very low volume.	MUTING has been pressed. (The -20dB indicator is lit.)	Press the button to disengage. (See page 17.)
One channel does not transmit audio, or the volume from the left and right speakers is unbalanced.	The speaker or program source is not connected correctly.	Check and properly connect the equipment. (See pages 8, 9, 10.)
There is an abrupt loss of sound from one or both of the speakers, and the PROTECTOR indicator flickers in the display window.	A short-circuit problem activates the protective circuit.	Turn off the unit, eliminate the short-circuit problem and turn on the power again. If there is no short-circuit problem, consult your nearest Sony dealer.
Sound transmitted from the speakers is reversed.	The speakers are not connected correctly.	Connect the speaker with the correct phase. (See page 10.)
There is lack of bass sound or the instrument position is obscure.	The +/- connection of the speaker is reversed.	Connect the speaker with the correct phase. (See page 10.)

(Continued on next page.)

Troubleshooting Guide

(Continued from previous page.)

Problem	Cause	Remedy
Severe hum or noise is heard.	The connecting cords are not shielded type.	Use shielded type cords.
	A transformer, motor, TV or fluorescent light affects the connecting cords.	Place the connecting cords in a location away from a transformer or motor, and at least 10 feet (3 meters) from a TV set or a fluorescent light.
	The audio components are too close to a TV set.	If both are used at the same time, separate the TV from the audio components.
	The unit is not grounded.	Connect the ground wire to the antenna ground terminal. (See page 7.)
	The connections are loose.	Make secure connections.
	The plugs and jacks are dirty.	Wipe the plugs and jacks with a cloth lightly dampened with alcohol.
Surround effect cannot be obtained.	The unit is in a wrong mode.	Display the SOUND FIELD menu and select the appropriate SOUND FIELD.
	Surround circuit is turned off.	Display the SOUND FIELD menu and select an appropriate SOUND FIELD.
Equalization curve adjustment is impossible.	The unit is in a wrong mode.	Press EQ EDIT in the SOUND FIELD menu to turn it on.
	Equalization circuit is turned off.	Display the SOUND FIELD menu and select an appropriate SOUND FIELD.
The remote commander will not operate.	The batteries are exhausted.	Replace the batteries with new ones.
	The commander head is not pointed toward the unit's front.	Point the commander head toward the receiver.
	The security number of the unit does not match that of the remote commander.	Change one of the numbers so that both numbers are the same for the unit and remote commander. (See page 11.)
The pointer on the screen moves even when the remote commander is stationary.	The commander has been subjected to a sudden temperature change or shock.	Place the commander on a flat surface, then try using it again when the on-screen display disappears.
The on-screen display disappears while you are using the commander.	The reception sensitivity of the RC antenna is poor.	Verify the following: —The RC antenna is connected to the unit properly. —There is no metal object near the RC antenna. —The remote commander is not too far from the RC antenna.
The remote commander signal cannot be programmed.	There is noise interference.	Place both remote commanders apart from the source of noise.
The display color is distorted.	The VCR is connected to the S VIDEO and VIDEO jacks at the same time.	Use S VIDEO jacks alone, or only the VIDEO jack if there is no S VIDEO connector on the TV. (See page 9.)
The TV set turns off when you try to turn on the unit with the commander.	The on/off signal of the remote commander is unsynchronized with that of the TV set.	Make sure that the TV set is off at the time you turn on the unit with the remote commander.

Note

If the unit does not operate properly even after attempting the prescribed remedies, try the following:

(1) Turn off the power and turn it on again. If the unit still does not work, (2) turn off the power, then reinsert the plug into the power outlet and turn the power on again. If the unit still does not work, (3) turn off the power, then turn it on while pressing VIDEO1 and VIDEO3 on the front panel. Note that (3) will erase all data recorded in the unit.